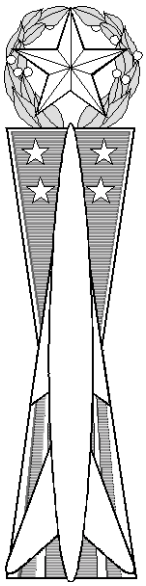
DEPARTMENT OF THE AIR FORCE
Headquarters US Air Force
Washington DC 20330-1030

CFETP 2M0X3
31 October 2000



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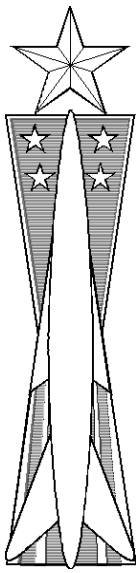
AFSC 2M0X3

MISSILE AND SPACE FACILITIES



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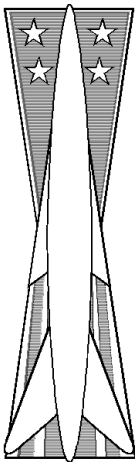

BASIC

CAREER FIELD EDUCATION AND TRAINING PLAN (CFETP)

DEPARTMENT OF THE AIR FORCE **CFETP 2M0X3**
Headquarters US Air Force **31 October 2000**
Washington DC 20330-1030

MISSILE AND SPACE FACILITIES SPECIALTY

AFSC 2M0X3
CAREER FIELD EDUCATION TRAINING PLAN

TABLE OF CONTENTS

Title **Page Number**

THIS DOCUMENT SUPERSEDES CFETP 2M0X3 DATED 31 JULY 1996

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MISSILE AND SPACE FACILITIES SPECIALTY
AFSC 2M0X3
CAREER FIELD EDUCATION TRAINING PLAN

PREFACE

1. A highly trained, motivated enlisted workforce is the Air Force's key resource in meeting challenges of the future. If the Air Force is to meet present and future challenges, it's essential the workforce be effectively and efficiently trained to perform duties within each skill level of the Air Force Specialty (AFS). The Career Field Education Training Plan (CFETP) for the Missile and Space Facilities Maintenance specialty provides the framework and guidance necessary for planning, developing, managing, and conducting a career field training program. The plan documents a "training roadmap" for the career field. This roadmap is used to identify mandatory and optional skill level training an individual should receive during their career in the Missile and Space Facilities Specialty.

2. The CFETP consists of two parts that are used to plan, manage, and control training within the 2M0X3 career field.

a. Part I provides information necessary for overall management of training in the career field. **Section A** explains how everyone will use the plan; **Section B** identifies career progression information, duties and responsibilities, training strategies, and career field flowcharts; **Section C** associates each skill level with specialty qualifications (knowledge, training, education, experience, and other); **Section D** identifies training resource constraints. Some examples are: funds, manpower, equipment, and facilities.

b. Part II includes the following: **Section A** identifies the Specialty Training Standard (STS)/Course Training Standard (CTS) and includes duties, tasks, technical references to support training, Air Education and Training Command (AETC) training conducted, wartime course/core task and correspondence course requirements; **Section B** identifies available OJT support materials. Qualification training packages identified in this section have been developed to support both upgrade and qualification training. These packages are indexed in AFIND 8 and are "F" distribution; **Section C** contains a training course index supervisors can use to determine resources available to support both mandatory and optional training. **Section D** can be used to identify Major Command (MAJCOM) unique training requirements. At unit level, supervisors and trainers use Part II to identify, plan, and conduct training commensurate with the overall goals of this plan.

3. Use of this CFETP will ensure each individual in the Missile and Space Facilities Specialty will receive effective and efficient training at the appropriate point in his/her career. This plan will enable the Air Force to train today's workforce for tomorrow's mission.

Abbreviations/Terms Explained

Advanced Training - A formal course that provides individuals who are already fully qualified in their Air Force Specialty (AFS) with additional skills/knowledge to enhance their expertise in the career field. Training is for selected career airmen at the advanced level of an AFS.

Career Development Course (CDC) - A formal written course that provides personnel with additional knowledge necessary to advance to the next higher skill level.

Career Field Education Training Plan (CFETP) - A multipurpose document that encapsulates the entire spectrum of training for a career field or specialty. It outlines a logical growth plan that includes training resources and is designed to make career field training identifiable, eliminate duplication, and is budget defensible.

Continuation Training - Additional qualification training exceeding the minimum upgrade training requirements with emphasis on present or future duty assignments.

Core Task - Tasks identified by Air Force specialty functional managers as minimum qualification requirements within an Air Force Specialty or duty position.

Critical Task - Tasks identified by the MAJCOM functional manager or local unit supervisors as additional qualification requirements within a specialty or duty position for assigned personnel.

Cruise missile (CM) - Personnel in AFSC 2M0XX and 2M0X1B associated with Air Launched Cruise missile (ALCM), Advanced Cruise missile (ACM) and Conventional Air Launched Cruise missile (CALCM) programs. These personnel are normally associated with Air Combat Command, but may be assigned in Air Force Material Command positions.

Facilities Maintenance Team (FMT) - FMT consists of personnel in AFSC 2M0X3 who troubleshoot and repair power generation/distribution and environmental control system faults at launch facilities and missile alert facilities.

Facility Manager (FM) - FMs consists of personnel in AFSC 2M0X3 who manage and maintain missile alert facility systems and activities.

Field Technical Training (Type 4) - Special or regular on-site training conducted by a field training detachment (FTD) or by a mobile training team (MTT).

Initial Skills Training (Type 3) - A formal resident course which results in award of the 3-skill level.

Intercontinental Ballistic Missile (ICBM) - Personnel in AFSC 2M0XX associated with Minuteman III and Peacekeeper weapon systems. These personnel are normally associated with Air Force Space Command, but may be assigned in Air Force Material Command positions.

Occupational Survey Report (OSR) - A detailed report showing the results of an occupational survey of tasks performed within a particular AFS.

On-The-Job Training (OJT) - A method used to certify personnel in both upgrade (skill level award) and qualification (duty position certification) training. OJT is hands-on, over-the-shoulder training conducted at the duty station.

Periodic Maintenance Team (PMT) - PMT consists of personnel in AFSC 2M0X3, who perform periodic inspections, troubleshoot and repair on launch facility and missile alert facility power, environmental control, power generation/distribution, and miscellaneous support systems.

Power Refrigeration and Electric (PREL) - 2M0X3s performing in-shop maintenance on weapons system components and support equipment at ICBM units.

Qualification Training (QT) - Actual hands-on task performance-based training designed to qualify an airman in a specific duty position or specific task. This training occurs both during and after the upgrade training process and is designed to provide performance skills training required to do the job.

Research and Development (R&D) - Personnel in AFSC 2M0XX associated with research, development, acquisition, and support of missiles, spacelift, lasers, weapons, drones, etc. These personnel are normally associated with Air Force Material Command.

Resource Constraints - Resource deficiencies, such as money, facilities, time, manpower, and equipment that preclude training from being delivered.

Spacelift - Personnel in AFSC 2M0XX associated with national space programs supporting the launch and recovery of space assets. These personnel are normally associated with Air Force Space Command.

Specialty Training Standard (STS) - Part II, Section A of the CFETP which identifies the training standard required to achieve a skill level(s) within an enlisted AFS. It standardizes and controls the quality of individual training.

Standard - A fixed quantity, quality, or level of performance that an individual is expected to demonstrate.

Upgrade Training (UGT) - Mandatory training which leads to the award of a higher skill level.

PART I
Section A - GENERAL INFORMATION

1. **Purpose of the CFETP**. This CFETP provides information that career field functional managers, training managers, commanders, supervisors, trainers, and the technical training center use to plan, develop, manage and conduct an effective and efficient career field training program. The plan outlines training those individuals must receive to develop and progress throughout their career. This plan identifies initial skills, upgrade, qualification, advanced, and continuation training. This plan does not address Professional Military Education (PME) or ancillary training. The CFETP has several purposes:

a. Serves as a management tool to plan, develop, manage, and conduct a career field training program. It is also used to ensure that established training is provided at the appropriate point in an individual career.

b. Identifies task and knowledge requirements for each skill level in the specialty and recommends training throughout each phase of an individual career.

c. Lists training courses available in the specialty, identifies sources of training, and provides the training medium.

d. Identifies major resource constraints that impact implementation of the desired career field training program.

2. **Use of the CFETP**. The CFETP will be approved and maintained by the Air Force Career Field Manager (AFCFM). The MAJCOM 2M0XX Functional Manager and AETC will review the CFETP annually to ensure currency and accuracy and forward recommended changes to the AFCFM. MAJCOMs must make sure training isn't developed that can be satisfied by existing courses. This plan will be used at all levels to ensure a comprehensive and cohesive training program is available and instituted for each individual in the career ladder.

a. AETC training personnel will develop/revise formal resident and exportable training based upon requirements established by the users and documented in part II of the CFETP. They will also develop procurement and acquisition strategies for obtaining resources needed to provide the identified training. In addition, the AETC training manager will prepare a camera ready CFETP and send to SAF/AADD for publication and notify HQ AETC to index the CFETP in AFIND 8. The training manager is also responsible for updates and publication of all changes. A Utilization and Training Workshop (U&TW) will be conducted as needed and hosted by the training manager. The AFCFM will chair the U&TW.

b. The MAJCOM functional managers will ensure their training programs complement the CFETP mandatory initial skills and UGT requirements. OJT, resident training, contract training, or exportable courseware/courses can satisfy identified requirements. MAJCOM-developed training must be identified for inclusion in this plan and must not duplicate available training.

c. Each individual will complete the mandatory training requirements specified in this plan. Unit level training managers and supervisors will manage and control progression through the career field by ensuring that each individual completes the mandatory training requirements for upgrade specified in this plan as supplemented by their MAJCOM. The list of courses in Part II, Sec. C, will be used as a reference to determine training required.

PART I
Section B - CAREER PROGRESSION AND INFORMATION

1. **Purpose**. This section provides information for career field functional managers, training managers, commanders, supervisors, trainers, and the technical training center use to plan career field progression in the Missile and Space Facilities specialty. This plan describes the functions and responsibilities of AFSC 2M0X3, skill progression, training decisions, and outlines Community College of the Air Force educational opportunities.

2. **Specialty Descriptions:**

a. Missile and Space Facilities Apprentice and Journeyman (2M033A/53).

(1) Specialty Summary. Inspects, troubleshoots, operates, maintains, repairs, and services power generation, environmental control, and associated support systems/equipment for missile, spacelift, and R&D facilities.

(2) Duties and Responsibilities.

(a) *Performs or directs and controls the performance of preventive and operator maintenance on missile, spacelift and R&D facilities.* Manages missile alert facility activities. Operates, troubleshoots, repairs, adjusts, removes/replaces, inspects, services or controls these actions on missile weapon systems, spacelift and R&D equipment, facilities and ground support equipment. Included are power generation and distribution systems such as diesel generators, automatic switching units, manual switching gear, distribution and control panels, portable auxiliary power units, battery systems, power processors and associated controls; Environmental Control Systems, brine chillers, Heating Ventilation Air Conditioners (HVAC), guidance and control chillers, guidance control conditioning units, test stands, refrigerant reclaiming/recycling systems, portable air conditioners, waste water systems and dewatering wells, water treatment systems; space lift support systems and associated equipment, and complies with hazardous materials handling procedures. Services or directs and controls the servicing of support equipment with fuel, lubricants, hydraulic fluid, and air. Isolates or directs and controls the isolation of malfunctions in support facilities and equipment, and arranges for repair. Complies with technical, procedural, safety, security, and quality assurance standards. Maintains and uses Air Force indexes, technical orders, and publications.

(b) *Monitors, operates, or directs and controls these actions for missile and spacelift support equipment.* Monitors, operates, and directs and controls these actions for fault display, check panels, and test stands to detect systems and component malfunctions. Determines operational readiness of support equipment. Includes testing or directing and controlling the testing of electrical

circuits; security, gas detection, and fire warning systems for proper operation; and auxiliary power equipment for readiness. Isolates or directs and controls the isolation of malfunctions in electrical, pneumatic, refrigeration, and power generation equipment by interpreting test equipment indications. Performs inspections, troubleshoots, repairs and operates special purpose vehicles. Operates or directs and controls the operation of diesel generators, battery systems, and portable self-powered handling equipment.

(c) *Assesses quality of personnel, facilities, and equipment.* Inspects personnel performance, equipment, and management functions for compliance with technical data and governing directives. Submits reports to management on all quality assessment findings.

(d) *Conducts maintenance and operations training.* Conducts initial, recurring, and special training of personnel.

b. Missile and Space Facilities Craftsman (2M073).

(1) Specialty Summary. Supervises the inspection, troubleshooting, operation, maintenance, repair, and servicing of power generation and distribution systems, environmental control systems, and associated support systems/equipment for missile, spacelift, and R&D facilities.

(2) Duties and Responsibilities.

(a) *Supervises the performance of preventive and operator maintenance on missile, spacelift and R&D facilities.* Manages activities at missile alert facilities. Supervises the operation, troubleshooting, repair, adjustment, removal/replacement, inspection, and servicing of missile weapon systems, spacelift and R&D facilities and ground support equipment. Included are power generation and distribution systems such as diesel generators, automatic switching units, manual switching gear, distribution and control panels, portable auxiliary power units, battery systems, power processors and associated controls; environmental control systems, brine chillers, Heating Ventilation Air Conditioners (HVAC), guidance and control chillers, guidance control conditioning units, test stands, refrigerant reclaiming and recycling systems, portable air conditioners, water treatment systems; waste water systems and dewatering wells; spacelift support systems and associated equipment, and complies with hazardous materials handling procedures. Supervises the troubleshooting and repair of electrical, pneudraulic, and mechanical accessories and components of direct support and real-property-installed equipment. Analyzes support facilities and equipment malfunctions and determines operational readiness to support mission. Determines nature and extent of repairs necessary to support launch or launch processing activities. Solves interface problems between electrical and electronic equipment by troubleshooting and analyzing equipment procedures.
Directs compliance of technical, procedural, safety, security, and quality assurance standards. Performs acquisition and activation functions for related systems. Supervises the maintenance of technical orders, publications, Air Force indexes, and record management.

(b) *Supervises the troubleshooting, repair, monitoring, and operation of missile, spacelift and R&D support equipment.* Troubleshoots, inspects, repairs and directs and controls these actions for auxiliary power units, hoists, and environmental control systems on support vehicles, and aerospace

ground equipment. Maintains records and logs on missile weapon system, spacelift and R&D support equipment.

(c) *Assesses quality of personnel, facilities, and equipment.* Inspects personnel performance, equipment, and management functions for compliance with technical data and governing directives. Submits reports to management on all quality assessment findings.

(d) *Conducts and assesses effectiveness of maintenance and operations training*. Conducts and assesses effectiveness of initial, recurring, and special training.

c. Missile and Space Systems Superintendent/Chief Enlisted Manager (2M090/00).

(1) Specialty Summary. Superintends maintenance, processing, acquisition, and operation of missiles, UAVs, spacelift boosters, payloads, and associated subsystems, facilities, support and test equipment. Superintends the activities associated with specialized R&D systems. Superintends maintenance activities engaged in on- and off-equipment maintenance of strategic bomber-launched missiles, aircraft missile and bomb rotary launchers, aircraft stores management systems, and associated test equipment.

(2) Duties and Responsibilities.

(a) *Plans and organizes missile, UAV, spacelift booster, payload, air launched missile and R&D maintenance and processing activities.* Manages processing activities. Develops organizational structure to establish lines of authority, and assigns specific responsibilities. Determines materiel and personnel requirements for current and projected commitments. Establishes work procedures for effective personnel use and increased efficiency and accuracy of operation. Analyzes inspection and test reports, and recommends product improvement. Requisitions and accounts for equipment, facilities, special tools, and supplies. Coordinates missile, booster, and payload maintenance and launch processing activities with base organizations. Manages acquisition and activation activities. Monitors engineers and technicians during R&D experiments for procedural compliance. Superintends ICBM coding operations and activities at missile alert facilities.

(b) *Directs missile maintenance, booster and payload launch processing, air-launched missile, and R&D activities.* Controls work flow, assigns special projects, and monitors program and special project progress. Monitors unit and individual productivity and work quality. Evaluates unit performance in terms of compliance with policies, directives, technical publications, and hazardous materials operations. Ensures conformance with prescribed efficiency, quality, and training standards. Supervises preparing and maintaining records and reports. Explains maintenance, operations, inspection, test, repair, and launch processing policies, procedures, and technical directives. Advises supervisors of missile, UAV, and spacelift systems, facilities, and personnel capabilities to meet requirements.

(c) *Inspects missile, UAV, booster, payload, air-launched missile, and R&D maintenance and processing functions.* Inspects and evaluates missile maintenance activities. Inspects and evaluates booster and payload maintenance and processing activities. Interprets efficiency and equipment reliability findings and recommends improvements. Reviews maintenance and processing data to evaluate programs and project requirements and capabilities. Analyzes unit records and reports for correcting or improving recurring malfunctions in missile, UAV, booster, and payload systems, subsystems, components, and related equipment. Coordinates inspection findings with other support agencies.

(d) *Instructs maintenance, operations and R&D functions*. Oversees the management and the integration of all training activities. Interprets and determines essential training requirements. Coordinates unit training requirements with all activities. Evaluates unit's training in terms of compliance with policies, directives and technical publications.

(e) *Supervises the performance of inspections to comply with international treaties.* Supervises inspections to comply with international treaties relating to nuclear weapons and associated equipment.

3. **Skill/Career Progression.** Quality training and timely progression from the apprentice to the superintendent skill level play an extremely important role in the Air Force's ability to accomplish its mission. Therefore, it is essential everyone involved in training do their part to plan, develop, manage, conduct, and evaluate an effective and efficient training program. The guidance provided in this part of the CFETP will ensure individuals receive viable training at appropriate points in their career. The following narrative and the AFSC 2M0X3 career field flowcharts identify the training career path and define training required.

a. Apprentice (3-skill level) Training. Initial skills training in this specialty consists of tasks and knowledge training provided in the Electronics Principles Course and Missile and Space Facilities Apprentice Course. Individuals must successfully complete these initial skills training courses to be awarded the 3-skill level.

b. Journeyman (5-skill level) Training. Upgrade training to the 5-skill level in the Missile and Space Facilities specialty consists of: (1) completion of mandatory requirements identified in AFI 36-2201, (2) completion of knowledge training provided in the 2M053 CDC, and (3) qualification on applicable 5-level core tasks identified in Part II, Section A3, of this plan. After award of the 5-skill level, continuation training, when available, should be utilized based on an individual's particular duty position or other needs. Continuation training is listed in, but not limited to that described in Part II, Section C, of this plan.

c. Craftsman (7-skill level) Training. Upgrade training to the 7-skill level in the Missile and Space Facilities specialty consists of: (1) completion of mandatory requirements identified in AFI 36-2201, (2) completion of knowledge training provided in the 2M073 CDC, and (3) qualification on applicable 7-level core tasks identified in Part II, Section A3, of this plan. After award of the 7-skill level, continuation training, when available, should be utilized based on an individual's particular training needs. Continuation training is listed in, but not limited to that described in Part II, Section C, of this plan.

d. Superintendent (9-skill level) Training. Upgrade training to the 9-skill level as a Missile and Space Systems Superintendent is accomplished by completion of requirements identified in AFI 36-2201. No additional requirements were identified for upgrade to AFSC 2M090. Continuation training, if available, should be utilized based on an individual's particular needs.

4. **Training Decisions**. The CFETP was developed to encapsulate an entire spectrum of training requirements for the Missile and Space Facilities specialty using a building block approach (simple to complex). Included in the spectrum was the strategy of when, where, and how to meet the training requirements. The strategy must be apparent and affordable to make it easier to comply with and reduce duplication of training. To do this, a realignment of present training is required. The following training decisions were made at the U&TWs held at Vandenberg AFB CA, 20 - 30 Sep 93 and 31 Jul - 4 Aug 95, and an ICBM Training Conference held at Peterson AFB, CO, 21-22 Feb 96. In addition there were Training Conferences conducted 23 - 26 Mar 98 and 23 - 25 Feb 99. Most recent U&TW was conducted 16 - 17 Aug 99.

a. Initial skills: The STS was rewritten to include tasks that were previously not identified prior to the AFSC mergers effective October, 1993 and April, 1994. All initial skills tasks were reviewed to include these functions. (20 - 30 Sep 93)

b. Upgrade training: In addition to Year of Training initiatives, the following decisions were made regarding AFSC 2M0X3:

(1) 5-level upgrade - All tech school graduates will be assigned to an operational missile unit to complete 5-level core task training requirements. Core tasks for upgrade to the 5-skill level will consist of Facilities Maintenance Team (FMT) or Periodic Maintenance Team (PMT) tasks. Power Refrigeration and Electric (PREL) tasks were discussed and a decision was reached to exclude them from the core task listing, placing the focus of five level training on field dispatching tasks. FMT/PMT training builds a foundation for subsequent progression into all other areas of the 2M0X3 career field. All applicable 5-level core task training must be completed prior to reassignment to a unit that does not possess 5-level core task training capability. (20 - 30 Sep 93)

(2) 7-level upgrade - Core tasks for upgrade to 7-level must be accomplished at an ICBM unit. Core tasks for upgrade to the 7-skill level were selected to ensure 2M0X3 personnel receive knowledge of all production workcenters that utilize 2M0X3 personnel . In order for an individual to satisfy 7 skill level core task requirements, he or she must complete all applicable core tasks identified. (20 - 30 Sep 93)

c. Personnel who were awarded the 5-skill level or 7-skill level prior to implementation of the Year of Training (YOT) initiatives **are not** required to complete core tasks for that awarded skill level. Individuals are highly encouraged to complete these core tasks, if possible. Personnel upgrading after the implementation of YOT initiatives must complete all upgrade training requirements, including core tasks. This decision was based on the overwhelming training burden that would result if personnel previously awarded 5-and 7-skill levels were required to return to training. Additionally, many personnel are located at units which could not comply with current core tasks identified by this U&TW. (20 - 30 Sep 93)

Note-Personnel must complete required 7-level core tasks prior to being eligible for assignment to spacelift and R&D units, or other positions that do not have the training capability to provide required core task training.

d. Mission Ready Training (MRT) Program: After the 2M0XX U&TW met 31 Jul - 4 Aug 95, the 2M0XX community was directed to incorporate the MRT concept in it's 3-level technical training. The Air Force MRT Program is designed to shift the training burden from the operational units to the technical school by producing certified 3-level apprentice personnel directly from technical school. Upon arrival at their first duty station, a mission ready trained apprentice may be utilized on those 3-level tasks certified at the technical school in minimum time. An ICBM MRT conference was held with representatives from all units to identify MRT 3-level tasks to be trained and certified by the technical school. Certification of these 3-level tasks by technical school instructors resulted in a significant increase in training days to the original U&TW. This and the MRT concept drove the group to reevaluate the STS requirements identified at the previous U&TW resulting in changes to the STS. All subjects and tasks were still covered; however, some were deleted from the basic course if they could be covered in the CDC. (21-22 Feb 96)

e. Mission Ready Technician (MRT) Program: After the Feb 98 AETC Trained Personnel Requirements (TPR) conference, a decision was made to revise the 2M0X1 Specialty Training Standards (STS). The existing MRT training courses cannot produce a sufficient amount of graduates to sustain the career field. Air Force Space Command (AFSPC) redefned MRT training requirements. (23-26 Mar 98)

f. Mission Ready Technician (MRT) will now be identified as a Mission Ready Airman (MRA). All 2M0XX specialty and course training standards were reviewed and revised. Seven -level in residence courses will be discontinued at Vandenberg AFB effective Mar 99. Space Launch Maintenance Training Course will be discontinued at Vandenberg AFB effective Sep 99. (23-25 Feb 99)

g. Career Field Manager directed a review of the 2M0XX technical training courses. The Technical Engineering B/CDB course will be discontinued in residence at Vandenberg AFB effective Sep 00. The Wing VI information will be converted to Wing IX, enhanced and moved to the AM/CDB course effective Oct 00. Career Development Courses (CDCs) were reviewed in-depth. A new Electronic Principles (EP) STS is scheduled to be implemented Oct 00. 20 AF will create a course for new shop chiefs incorporating the 532d Training Squadron's discontinued 7-level course material. (16-17 Aug 99)

5. **Community College of the Air Force Academic Programs**. Enrollment in CCAF occurs upon completion of basic military training. *Off duty education is a personal choice but highly encouraged*. Individuals desiring to become an Air Education and Training Command Instructor should actively pursue an associate degree. A degreed faculty is necessary to maintain accreditation through the Southern Association of Colleges and Schools. CCAF provides the opportunity to obtain an Associate in Applied Sciences Degree. In addition to its associate degree program, CCAF offers the following:

a. Occupational Instructor Certification. Upon completion of instructor qualification training, consisting of an instructor methods course and supervised practice teaching, CCAF instructors who possess an associate degree or higher may be nominated by their school commander/commandant for certification as an Occupational Instructor.

b. Trade Skill Certification. When a CCAF student separates or retires, a trade skill certification is awarded for the primary occupational specialty. The College uses a competency based assessment process for trade skill certification at one of four proficiency levels - Apprentice, Journeyman, Craftsman/Supervisor, or Master Craftsman/Manager. All are transcribed on the CCAF transcript.

c. Degree Requirements. The skilled (5) level must be held at the time of program completion with degree requirements for an Associate in Applied Science in Mechanical and Electrical Technology as follows:

Overall Requirements

Subject	*Semester Hours*
Technical Education	24
Leadership, Management, and Military Studies	6
Physical Education	4
General Education	15
Program Elective	15
Total	**64**

d. Technical Education (24 Semester Hours): A minimum of 12 semester hours of Technical Core subjects/courses must be applied and the remaining semester hours applied from Technical Core/Technical Elective subjects/courses. Requests to substitute comparable courses or to exceed specified semester hour values in any subject/course must be approved in advance by the Services Branch. Refer to page 15 for Application of Courses to the Technical Education area.

Technical Core

Subjects/Courses	*Maximum Semester Hours*
CCAF Internship	16
Electrical Power Production	20
Electrical Systems	20
Heating Systems	20
Refrigeration and Air-Conditioning	20
Missile and Space Facilities	28

Technical Electives

Subjects/Courses	*Maximum Semester Hours*
Air Force Enlisted Professional Military Education	12
Air Distribution and Filtering Systems	3
Blueprint Reading/Schematic Reading	6
Building Codes and Ordinances	3
Computer Science	6
Control Systems/Maintenance	6

Electronics..... 6
Engine Principles..... 3
Industrial Management..... 3
Industrial Safety..... 3
Alternate Heating and Cooling..... 3
Motor, Starter, and Control Devices..... 6
Quality Assurance..... 3
Environmental Awareness..... 3
Environmental Compliance..... 3
Technical Mathematics (College Algebra or Higher)..... 3
Technical Physics..... 4
Technical Writing..... 3
Welding and Pipe fitting..... 3

e. Leadership, Management, And Military Studies (6 Semester Hours): Professional military education and/or civilian management courses. The preferred method of completing Leadership, Management, and Military Studies is through attendance at an Airman Leadership School, MAJCOM NCO Academy, and/or Air Force Senior NCO Academy. However, civilian courses that emphasize fundamentals of managing human or material resources may also be applicable.

f. Physical Education (4 Semester Hours): Basic Military Training satisfies this requirement.

g. General Education (15 Semester Hours): This requirement is satisfied by application of courses accepted in transfer or by testing credit. The following is a specific breakout of requirements:

Subjects/Courses *Semester Hours*
Oral Communication (Speech)..... 3
Written communication (English Composition)..... 3
Mathematics..... 3
Intermediate algebra or a college-level mathematics course is required. If an acceptable mathematics course is applied as a Technical or Program Elective, a natural science course meeting general education requirements Application criteria may be applied as a General Education Requirement.
Social Science..... 3
Anthropology, Archeology, Economics, Geography, Government, History, Political Science, Psychology, Sociology.
Humanities..... 3
Fine Arts (History, Criticism, and Appreciation), Foreign Language, Literature, Philosophy, Religion.

h. Program Elective (15 Semester Hours): Satisfied with applicable Technical Education; Leadership, Management, and Military Studies; or General Education subjects/courses, including natural science courses meeting general education requirements application criteria. Six semester hours of CCAF degree-applicable technical credit, otherwise not applicable to this program, may be applied.

6. **Career Field Flow Charts**. Charts depicting this career path are presented. The Career path outlines when training is required for career progression within this specialty. This is a nominal timeline for comparison purposes only.

2M0X3 MISSILE AND SPACE FACILITIES SPECIALTY TRAINING FLOW

6 MONTHS	- COMPLETE 3-LEVEL COURSES -- ELECTRONIC PRINCIPLES -- MISSILE FACILITIES TECH SCHOOL - AWARD 3-LEVEL - AWARD OF BASIC MISSILE BADGE
12 MONTHS	- ENROLL IN 5-LEVEL CDC - BEGIN 5-LEVEL CORE TASK TRAINING
24 MONTHS	- COMPLETE CDC - COMPLETE 5-LEVEL CORE TASK TRAINING
36 MONTHS	- PROMOTE E-4/AWARD 5-LEVEL - ADDITIONAL CONTINUATION TRAINING
48 MONTHS	- AIRMAN LEADERSHIP SCHOOL - TRAINER DUTIES
6.5 YEARS	- PROMOTION TO E-5 - BEGIN 7-LEVEL CORE TASK TRAINING - BEGIN 7-LEVEL CDCs
8 YEARS	- 18 MONTHS TIG AS SSGT - COMPLETE 7-LEVEL CDCs - COMPLETE CORE TASK TRAINING
11 YEARS	- SELECTION FOR PROMOTION TO E-6 - AWARD 7-LEVEL - NCO ACADEMY - AWARD OF SENIOR MISSILE BADGE
14 YEARS	- SELECTION FOR PROMOTION TO E-7 - ADVANCED TRAINING COURSES
16 YEARS	- AWARD OF MASTER MISSILE BADGE
18 YEARS	- SELECTION FOR PROMOTION TO E-8 - SENIOR NCO ACADEMY - AWARD 9-LEVEL

2M0X3 MISSILE AND SPACE FACILITIES SPECIALTY TRAINING FLOW

23 YEARS - SELECTION FOR PROMOTION TO E-9

PART I
Section C - SKILL LEVEL TRAINING REQUIREMENTS

1. **Purpose**. The various skill levels in the career field are defined in terms of tasks and knowledge requirements for each skill level in the Missile and Space Facilities specialty. They are stated in broad, general terms and establish the standards of performance. The specific task and knowledge training requirements are identified in the STS.

2. **Missile and Space Facilities Apprentice (3-skill level).**

a. Specialty Qualifications.

(1) Knowledge. Knowledge is desirable of electrical, mechanical, and pneumatic principles; and using and interpreting technical orders, work flow diagrams, blueprints, and schematics.

(2) Education. Completion of high school with courses in mathematics and physics is desirable.

(3) Training. The following requirements are mandatory for award of the 3-skill level:

(a) Completion of the in-residence Electronics Principles course.

(b) Completion of the in-residence Missile and Space Facilities Apprentice course.

(c) Initial shotgun qualification.

(4) Other. Any record of emotional instability precludes entry, award, and retention of AFSC 2M0X3. Normal color vision and depth perception as defined in AFI 48-143 is mandatory for entry into this AFSC. Eligibility for a Secret security clearance according to AFI 31-501 is mandatory for award and retention of this AFSC. Eligibility for Personnel Reliability Program (PRP) certification IAW AFI 36-2104 is mandatory to complete core requirements and upgrade to the 5-skill level.

b. Training Sources/Resources. Completion of the basic Space and Missile Facilities Course at Vandenberg AFB, CA satisfies the knowledge and training requirements for the award of the 3-skill level. A list of all training courses to support education and training is in Part II, Section C of this CFETP.

3. **Missile and Space Facilities Journeyman (5-skill level)**.

a. Specialty qualifications.

(1) Knowledge. Knowledge is mandatory of electrical, mechanical, and pneumatic principles; using technical orders, work flow diagrams, blueprints, and schematics.

(2) Education. Completion of high school with courses in mathematics and physics is desirable.

(3) Training. The following requirements are mandatory for award of the 5-skill level:

(a) Completion of mandatory requirements in AFI 36-2201.

(b) Completion of the 5-skill level CDC 2M053.

(c) Qualification on applicable 5-skill level core tasks for the assigned weapon system.

(4) Experience. Experience is mandatory in missile facilities maintenance team tasks or periodic maintenance team tasks.

(5) Other. Any record of emotional instability precludes entry, award, and retention of AFSC 2M0X3. Normal color vision and depth perception as defined in AFI 48-143 is mandatory for entry into this AFSC. Eligibility for a Secret security clearance according to AFI 31-501 is mandatory for award and retention of this AFSC. Eligibility for Personnel Reliability Program certification IAW AFI 36-2104 is mandatory to complete core requirements and upgrade to the 5-skill level.

b. Five level core tasks - All 2M033A personnel will be qualified/certified on the applicable core tasks before being awarded a 5 skill-level. Mandatory 2M053 core tasks are listed in attachment 2 of the 2M0X3 STS.

c. Training Sources/Resources. The STS identifies all the core tasks required for qualification in the individual's weapon system. Qualified trainers provide UGT and QT. Continuation (Advanced) training courses are available and individuals should attend based on training needs and duty position requirements. A list of all training courses to support education and training is in Part II, Section C of this CFETP.

d. Implementation. Entry into upgrade training may be initiated when an individual possesses the 3-skill level and has been assigned to the base. Then, the individual may be enrolled in the 2M053 CDC upon recommendation of the supervisor. Qualification training is initiated anytime an individual is assigned duties he/she is not qualified to perform.

4. **Missile and Space Facilities Craftsman (7-skill level)**.

a. Specialty Qualifications.

(1) Knowledge. Knowledge is mandatory of electrical, mechanical, and pneumatic principles; using and interpreting technical orders, work flow diagrams, blueprints, and schematics.

(2) Education. To assume the grade of SSgt and MSgt, individuals must be graduates of the Airman Leadership School and NCO Academy, respectively.

(3) Training. The following requirements are mandatory for award of the 7-skill level:

(a) Completion of mandatory requirements in AFI 36-2201.

(b) Completion of the 7-skill level CDC 2M073.

(c) Qualification on all applicable 7-skill level core tasks for the assigned weapon system.

(4) Experience. Qualification is mandatory as a Missile and Space Facilities Journeyman. Also, experience is mandatory in performing or supervising functions in 2M0X3 production workcenters.

(5) Other. Any record of emotional instability precludes entry, award, and retention of AFSC 2M0X3. Normal color vision and depth perception as defined in AFI 48-143 is mandatory for entry into this AFSC. Eligibility for a Secret security clearance according to AFI 31-501 is mandatory for award and retention of this AFSC. Eligibility for Personnel Reliability Program certification IAW AFI 36-2104 is mandatory to complete core requirements and upgrade to the 7-skill level.

b. Seven level core tasks - All 2M053 personnel will be qualified/certified on the applicable core tasks before being awarded a 7 skill-level. See the appropriate portion of the STS in part II, section C for a list of core tasks.

Note-Personnel must complete required 7-level core tasks prior to being eligible for assignment to spacelift and R&D units, or other positions that do not have the training capability to provide required core task training.

(1) 2M073 Core Tasks. Mandatory core tasks for 2M0X3s assigned to ICBM units are listed in attachment 2 of the 2M0X3 STS. Due to system and equipment limitations at Vandenberg AFB, the following STS tasks are not required for 7-level core task training: 6a(2e), 6a(3d), 6a(4d), 6a(5d), 6a(6d), 6a(11d), 6a(12d), 6a(13d), 6a(15e), 6a(16d), 6e(1d), and 6e(3d).

c. Training Sources/Resources. The STS identifies all the core tasks required for qualification in the individual's duty position. UGT and QT are provided by qualified trainers. Continuation (Advanced) training courses are available and individuals should attend based on training needs and duty position requirements. A list of all training courses to support education and training is in Part II, Section C of this CFETP.

d. Implementation. Entry into upgrade training is initiated when an individual possesses the 5-skill level and has been selected for promotion to the grade of SSgt. Qualification training is initiated any time an individual is assigned duties he/she is not qualified to perform.

5. **Missile and Space Systems Superintendent (9-skill level)**.

a. Specialty Qualifications.

(1) Knowledge. Possess advanced skills and knowledge of ICBM, Air Launched Missiles, R&D systems, and Spacelift operations.

(2) Education. To assume the grade of CMSgt, individuals must be graduates of the Senior NCO Academy.

(3) Training. Completion of mandatory requirements in AFI 36-2201.

(4) Experience. Qualification as one of the following is mandatory: Missile and Space Systems Electronics Craftsman, Missile and Space Systems Maintenance Craftsman, or Missile and Space Facilities Craftsman.

(5) Other. Any record of emotional instability precludes entry, award, and retention of AFSC 2M090. Normal color vision as defined in AFI 48-143 is mandatory for entry into this AFSC. Eligibility for a Secret security clearance according to AFI 31-501 is mandatory for award and retention of this AFSC.

b. Training Sources/Resources. A list of all training courses to support education and training is in Part II, Section C of this CFETP.

c. Implementation. Entry into OJT is initiated when an individual possesses the 7 skill level and is a SMSgt selectee. Qualification training is initiated anytime an individual is assigned duties he/she is not qualified to perform.

PART I
Section D - RESOURCE CONSTRAINTS

Purpose. This section of CFETP identifies known resource constraints which preclude minimal/desired training from being developed or conducted. This section includes a narrative explanation of each resource constraint and impact statement describing what effect each constraint has on training. Also identified in this section are the resources needed to satisfy training requirements, include information such as part numbers, national stock numbers, number of units required, cost, manpower, etc. Finally, this section includes action required, identifies the OPR, and establishes target completion dates. Resource constraints will be, at a minimum, reviewed and updated annually.

None identified.

PART II
Section A - SPECIALTY TRAINING STANDARDS

1. **Purpose**. This section identifies the specific task and knowledge training requirements required for personnel to be awarded specific skill levels and perform duties in AFSC 2M0X3. This section contains:

a. Section A1 - The Proficiency Code Keys**.** The proficiency code key is used to indicate level of training and knowledge provided by resident training and career development courses. This proficiency code key applies to the training standards in section A2 and A3.

b. Section A2 - The Course Training Standard for the Electronic Principles Course. This course is a prerequisite for all personnel attending the in-residence Missile Facilities Apprentice course.

c. Section A3 - The STS for the 2M0X3 Missile and Space Facilities career field. It identifies the training requirements for the 3-/5-/7-skill levels of AFSC 2M0X3. The 3-level column reflects training requirements for the Apprentice course. The 5- and 7-level CDC columns identify the knowledge requirements for development of the 5-and 7-level CDCs for the 2M0X3 career field. Attachments to the STS list the qualification tasks for specific weapon systems/duties of the 2M0X3 career field. These attachments also identify the core tasks and any critical tasks.

2. Qualification training will be documented on the appropriate attachment of the 2M0X3 STS unless the AFCFM has approved the use of other training systems to document and manage the training of 2M0X3 personnel.

Part II
Section A1

PROFICIENCY CODE KEY		
	SCALE VALUE	**DEFINITION: THE INDIVIDUAL**
TASK PERFORMANCE LEVELS	**1**	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (EXTREMELY LIMITED)
	2	Can do most parts of the task. Needs help only on hardest parts. (PARTIALLY PROFICIENT)
	3	Can do all parts of the task. Needs only a spot check of completed work. (COMPETENT)
	4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. (HIGHLY PROFICIENT)
TASK KNOWLEDGE LEVELS	**a**	Can name parts, tools, and simple facts about the task. (NOMENCLATURE)
	b	Can determine step by step procedures for doing the task. (PROCEDURES)
	c	Can identify why and when the task must be done and why each step is needed. (OPERATING PRINCIPLES)
	d	Can predict, isolate, and resolve problems about the task. (ADVANCED THEORY)
SUBJECT KNOWLEDGE LEVELS	**A**	Can identify basic facts and terms about the subject. (FACTS)
	B	Can identify relationship of basic facts and state general principles about the subject. (PRINCIPLES)
	C	Can analyze facts and principles and draw conclusions about the subject (ANALYSIS)
	D	Can evaluate conditions and make proper decisions about the subject. (EVALUATION)

EXPLANATIONS

* A task knowledge value may be used alone or with a task performance scale value to define a level of a specific task. (Examples: b and 1b)

** A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common in several tasks.

\- This mark is used alone instead of a scale to show that no proficiency training is provided in the course or CDC.

X This mark is used in course columns to show that training is required but not given due to limitations in resources.

Part II
Section A2

DEPARTMENT OF THE AIR FORCE.....CTS L3ATR40020 002
37 Training Group.....PDS Code (See Paragraph 2)
Lackland Air Force Base, Texas 78236-5417..... 21 September 1999

ELECTRONIC PRINCIPLES
Condensed Course

1. Implementation of training in support of this CTS is with the first class after 1 October 2000.

2. Purpose. This course training standard:

a. Establishes the training requirements using tasks, knowledge, and proficiency levels of training for the following courses:

PDS Code PO4 (34 days):
L3AQR2A331A 332 (PDS Code PO4)
L3AQR2A331B 332 (PDS Code PO4)
L3AQR2A331C 332 (PDS Code PO4)
L3AQR2A332 332 (PDS Code PO4)
L3AQR2A533A 332 (PDS Code PO4)
L3AQR2A533A 333 (PDS Code PO4)
L3AQR2A533B 332 (PDS Code PO4)
L3AQR2A533C 332 (PDS Code PO4)
L3AQR2M031A 332 (PDS Code PO4)
L3AQR2M031B 332 (PDS Code PO4)
L3AQR2M033A 332 (PDS Code PO4)

PDS Code PO5 (31 days):
L3AQR2A131 301 (PDS Code PO5)
L3AQR2A131 302 (PDS Code PO5)

PDS Code PO6 (7 days):
L3AQR2MO32A 701 (PDS Code PO6)

Provides the basis for the development of more detailed training materials, training objectives, and training evaluation instruments for the course.

c. Is derived from the Course Training Standard for the Electronic Principles Master Course L3ATR40020 001. The Master Course CTS permanently replaces the Electronics Fundamentals and Applications (EF&A) listing dated June 1996.

DEPARTMENT OF THE AIR FORCE.....CTS L3ATR40020 002
37 Training Group.....PDS Code (See Paragraph 2)
Lackland Air Force Base, Texas 78236-5417..... 21 September 1999

3. Course description. This course provides training in the knowledge and skills needed to perform the duties of maintenance personnel for several AFSCs. This course also trains selected DOD and International Military personnel, and is the prerequisite for follow-on courses either at Sheppard or Vandenberg AFB. The scope of training includes safety, first aid, Direct Current (DC) principles, Alternating Current (AC) principles, semiconductors, power supplies, amplifiers, waveshaping circuits, digital circuits, computer fundamentals, and soldering. The training day for this course is an 8 hour training day for each student. The scope of training is tailored to the prerequisites of the AFSCs. Trainees must be assigned as a student in one of the following AFSCs: 2A331X, 2A332, 2A533X, 2M031X, 2M032A, or 2M033A, international students destined for 2A131 factory training, or the civilian or other military equivalent. Specific course content is identified on the attached training matrix. AFSCs identified in previous EP Training Plans but not reflected above will be trained in the EP Master Course, L3ATR40020-001, which has its own Training Plan and CTS. There is one exception. Effective 1 October 2000, the 2E631 career field will merge into the 2E632 AFSC. Therefore 2E631 training will be discontinued after 1 October 2000.

4. Qualitative requirements: Attachment 1 contains the tasks, knowledge, and proficiency levels referenced in paragraph 2. Columns are marked with a proficiency code to indicate subjects taught. Trainees without prerequisites specified in AFCAT 36-2223 cannot be expected to meet proficiency levels indicated.

Recommendations: Comments and recommendations are invited concerning quality of AETC training. Reference this CTS and address correspondence regarding changes to 37 Training Group/TTS, 1000 Mercury Drive, Lackland AFB, TX 78236-5717. Return the Field Evaluation Questionnaire (FEQ), to identify unsatisfactory performance of individual graduates. A Customer Service Information Line has been installed for the supervisor's convenience to identify graduates who may have received over or under training on task/knowledge items listed in this training standard. For a quick response to problems, call our Customer Service Information Line, DSN 473-2917, anytime day or night.

OFFICIAL

KENNETH M. FREEMAN, Colonel,USAF
Commander

JESSE JOHNSON, MSgt, USAF
Chief, Group IM

2 Attachments
1. Qualitative Requirements
2. Task Listing

Supersedes: None
Prepared by: 342 TRS/DOR
Distribution: See page i

DEPARTMENT OF THE AIR FORCE.....CTS L3ATR40020 002
37 Training Group.....PDS Code (See Paragraph 2)
Lackland Air Force Base, Texas 78236-5417..... 21 September 1999

QUALITATIVE REQUIREMENTS

PROFICIENCY CODE KEY		
	SCALE VALUE	DEFINITION: The individual
Task Performance Levels	1	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (EXTREMELY LIMITED)
	2	Can do most parts of the task. Needs help only on hardest parts. (PARTIALLY PROFICIENT)
	3	Can do all parts of the task. Needs only a spot check of completed work. (COMPETENT)
	4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. (HIGHLY PROFICIENT)
***Task Knowledge**	a	Can name parts, tools, and simple facts about the task. (NOMENCLATURE)
	b	Can determine step by step procedures for doing the task. (PROCEDURES)
	c	Can identify why and when the task must be done and why each step is needed. (OPERATING PRINCIPLES)
	d	Can predict, isolate, and resolve problems about the task. (COMPLETE THEORY)
****Subject Knowledge**	A	Can identify basic facts and terms about the subject. (FACTS)
	B	Can identify relationship of basic facts and state general principles about the subject. (PRINCIPLES)
	C	Can analyze facts and principles and draw conclusions about the subject. (ANALYSIS)
	D	Can evaluate conditions and make proper decisions about the subject. (EVALUATION)

EXPLANATIONS

* A task knowledge scale value may be used alone or with a task performance scale value to define a level of knowledge for a specific task. (Examples: b and 1b)

** A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common to several tasks.

X This mark is used alone instead of a scale value to show that no proficiency training is provided in the course.

\- This mark is used alone in course columns to show that training is required but not given due to limitations in resources.

Distribution:
HQ AETC/XPMRT, Randolph AFB TX
HQ 2AF/DOP, Keesler AFB MS
37 TRW/MQ, Lackland AFB TX;
37 TRW/SE, Lackland AFB TX
37 TRSS/DOR, Lackland AFB TX
342 TRS/DORM, Lackland AFB, TX
342 TRS/TTEP, Lackland AFB TX
365 TRS, Sheppard AFB TX
532 TRS, Vandenberg AFB, CA
AETC FORM 60, JUL 93 REPLACES ATC FORM 60, WHICH IS OBSOLETE.

QUALITATIVE REQUIREMENTS

	P04	P05	P06
1. ELECTRONICS SUPPORT SUBJECTS			
1.1. Safety	B	B	B
1.2. First Aid	B	B	B
1.3. Electrostatic Discharge (ESD) Control	B	B	-
1.4. Electromagnetic Effects (EMP/EMI)	B	B	-
1.5. Metric Notation			
1.5.1. Powers of Ten	B	B	B
1.5.2. Electrical Prefixes	B	B	B
2. USE TEST EQUIPMENT			
2.1. Analog Multimeter	2b	2b	2b
2.2. Digital Multimeter	2b	2b	2b
2.3. Oscilloscope	-	-	-
2.4. Signal Generator	-	-	-
3. BASIC CIRCUITS			
3.1. Direct Current (DC)			
3.1.1. Terms	B	B	B
3.1.2. Theory	B	B	B
3.1.3. Calculations	B	B	B
3.2. Alternating Current (AC)			
3.2.1. Terms	B	B	-
3.2.2. Calculations	B	B	-
4. BASIC CIRCUIT COMPONENTS			
4.1. Resistors			
4.1.1. Theory	B	B	B
4.1.2. Color Code	B	B	B
4.1.3. Troubleshoot	2b	2b	2b
4.2. Inductors			
4.2.1. Theory	B	B	-
4.2.2. Troubleshoot	2b	2b	-
4.3. Capacitors			
4.3.1. Theory	B	B	-
4.3.2. Troubleshoot	2b	2b	-

	P04	P05	P06
4.4. Resistive-Capacitive-Inductive (RCL) Circuits Theory			
4.4.1. Basic	-	-	-
4.4.2. Resonant	-	-	-
4.4.3. Frequency Sensitive Filter	-	-	-
5. ELECTROMAGNETIC DEVICES			
5.1. Transformers			
5.1.1. Theory	B	B	-
5.1.2. Troubleshoot	2b	2b	-
5.2. Relays and Solenoids			
5.2.1. Theory	B	B	-
5.2.2. Troubleshoot Relays	2b	2b	-
5.3. Motor Theory			
5.3.1. Direct Current (DC)	B	B	-
5.3.2. Alternating Current (AC)	B	B	-
5.4. Generator Theory			
5.4.1. Direct Current (DC)	B	B	-
5.4.2. Alternating Current (AC)	B	B	-
5.5. Synchro/Servo			
5.5.1. Theory	B	B	-
5.5.2. Fault Isolate	b	b	-
5.6. Transducer Theory	B	B	-
6. SOLID STATE DEVICES			
6.1. Diodes			
6.1.1. Theory	B	B	-
6.1.2. Troubleshoot	2b	2b	-
6.2. Bipolar Junction Transistors			
6.2.1. Theory	B	B	-
6.2.2. Troubleshoot	2b	2b	-
6.3. Special Purpose Device Theory			
6.3.1. Zener Diode	B	B	-
6.3.2. Light Emitting Diode (LED)	B	B	-
6.3.3. Liquid Crystal Display (LCD)	B	B	-
6.3.4. Integrated Circuits (IC)	B	B	-

	P04	P05	P06
6.3.5. Metal Oxide Semiconductor Field Effect Transistor (MOSFET)	-	-	-
6.3.6. Operational Amplifiers	-	-	-
7. TRANSISTOR AMPLIFIER CIRCUITS			
7.1. Theory	-	-	-
7.2. Stabilization	-	-	-
7.3. Coupling	-	-	-
7.4. Troubleshoot	-	-	-
8. POWER SUPPLY CIRCUITS			
8.1. Theory			
8.1.1. Rectifiers	B	B	-
8.1.2. Filters	B	B	-
8.1.3. Voltage Regulators	B	B	-
8.2. Troubleshoot	-	-	-
9. WAVE GENERATING CIRCUITS			
9.1. Theory			
9.1.1. Oscillators	B	B	-
9.1.2. Multivibrators	B	B	-
9.1.3. Waveshaping Circuits	B	B	-
9.2. Fault Isolate	-	-	-
10. DIGITAL NUMBERING SYSTEMS			
10.1. Conversions			
10.1.1. Binary	B	B	-
10.1.2. Octal	B	B	-
10.1.3. Hexadecimal	B	B	-
10.1.4. Binary Coded Decimal	B	B	-
10.2. Binary Math Operations	B	B	-
11. DIGITAL LOGIC CIRCUITS			
11.1. Theory			
11.1.1. Gates	B	B	-
11.1.2. Flip-flops	B	B	-
11.1.3. Counters	-	-	-
11.1.4. Registers	-	-	-
11.1.5. Combinational Logic Circuits	-	-	-
11.2. Troubleshoot	-	-	-

	P04	P05	P06
11.3. Digital to Analog (DA) and Analog to Digital (AD) Convertors Theory	A	A	-
12. BASIC COMPUTER FUNDAMENTALS			
12.1. Computer Theory			
12.1.1. Hardware	B	B	-
12.1.2. Software			
12.1.2.1. Operating Systems	B	B	-
12.1.2.2. Virus Protection	B	B	-
12.1.2.3. Diagnostics	B	B	-
12.1.2.4. Applications	B	B	-
12.1.3. Peripherals	B	B	-
12.2. Network Theory			
12.2.1. Components	-	-	-
12.2.2. Types	-	-	-
12.2.3. Topologies	-	-	-
12.2.4. Communication Mediums	-	-	-
13. BASIC COMMUNICATIONS THEORY			
13.1. Antenna	B	B	-
13.2. Transmission Lines	B	B	-
13.3. Waveguides	B	B	-
13.4. Transmitters			
13.4.1. Amplitude Modulation (AM)	B	B	-
13.4.2. Frequency Modulation (FM)	B	B	-
13.5. Receivers			
13.5.1. Amplitude Modulation (AM)	B	B	-
13.5.2. Frequency Modulation (FM)	B	B	-
14. SOLDER AND DESOLDER			
14.1. Terminal Connection	2b	-	-
14.2. Printed Circuit Board (PCB)	2b	-	-
14.3. Multipin Connector	2b	-	-
14.4. Coaxial Connector	2b	-	-
15. ASSEMBLE SOLDERLESS CONNECTORS			
15.1. Crimped Connection	2b	-	-
15.2. Coaxial Connector	2b	-	-
15.3. Multipin Connector	2b	-	-

PART II
Section A3

AFSC 2M0X3
SPECIALTY TRAINING STANDARD

1. **Purpose.** As prescribed in AFI 36-2201, this STS:

a. Lists the tasks, knowledge, and technical references (TR) necessary for airmen to perform in the 3, 5, and 7-skill level in the Missile and Space Facilities ladder of the Missile and Space Systems Career Field. These are based on an analysis of the duties in AFI 36-2108. Those tasks marked with an asterisk (*) will be trained in the resident wartime initial skills course.

Note: Users are responsible for annotating training references to identify current references pending STS revision.

b. Shows formal training requirements. The basic STS shows the level to which task/knowledge training has been accomplished by the Technical Training Unit for courses 2M033A and 2M073, as described in ETCA, located on the HQ 2AF website. When two codes are used in the same task proficiency column, the first code is the established requirement for resident training on the task/knowledge, and the second code indicates the level of training provided in the course due to equipment shortages or other resource constraints.

c. Indicates the career knowledge provided in the 5-skill level and 7-skill level CDC. See ECI/AFSC/CDC listing maintained by the unit Enlisted Specialty Training (EST) manager for current CDCs or part II, section C of the CFETP.

d. Identifies Air Force minimum core task training requirements for award of AFSCs 2M053 and 2M073.

e. Provides OJT certification columns to record completion of task and knowledge training requirements.

f. Is a guide for development of promotion tests used in the Weighted Airman Promotion System (WAPS). Senior NCOs with extensive practical experience in the career fields develops specialty Knowledge Tests (SKTs) at the USAF Occupational Measurement Squadron. The test samples knowledge of STS subject matter areas judged by test development team members to be the most appropriate for promotion to higher grades. Questions are based on the study references listed in the WAPS catalog. Individual responsibilities are in AFI 36-2605**.**

g. Serves as a Job Qualification Standard (JQS). Trainees are trained, evaluated and qualified to the go/no go level. “Go” means the individual can perform the task without assistance and meets local requirements for accuracy, timeliness, and correct use of procedures. This document may be automated in whole or part to reflect duty position requirements and qualifications.

h. Upgrade Certification Procedures: Prior to upgrade, all 2M0X3 maintenance personnel, regardless of duty position, must satisfactorily complete upgrade training requirements identified in Part I, Section B, paragraph 3b for 5-level upgrade, paragraph 3c for 7-level upgrade, and paragraph 3d for 9-level upgrade. Trainees must also meet AFSC experience requirements outlined in AFI 36-2101 and AFI 36-2108. Work centers may add local upgrade core tasks and non-mandatory tasks to the applicable attachment. Completion of non-mandatory tasks pertinent to the unit will continue to be accomplished as tasks become available for training.

(1) Five skill level core tasks are listed in attachment 2.

(2) Seven skill level core tasks are listed in attachment 2.

2. Records Documentation. Document training as follows:

a. Identification: Enter trainee, trainer, and certifying official information on the JQS identification page.

b. Certification: Certify tasks in pencil as follows:

(1) Identify tasks required for current duty position by circling applicable task numbers. If in skill level upgrade training, circle required core tasks and other required tasks (as applicable) commensurate with the required upgrade skill level. Erase all circles on task numbers not required for current duty position when upgrade action is complete. Erasing the circles does not decertify the individual on those tasks.

(2) When task training starts, enter the training start date.

(3) When the trainer and trainee agree to task proficiency, enter the completion date and both will initial the appropriate section of the JQS. If third party certification is required, i.e. core tasks, task certification occurs when the appropriate certifier determines the trainee is proficient, and initials the certifying officials block for that task. Third party certifiers are mandatory for all core tasks and MAJCOM identified critical tasks (see AFI 36-2201 for exceptions). Exceptions are for certifiers and only apply to grade/skill level and the "someone other than the trainer" requirements. For non-core tasks, only the trainer's initials in the trainer block are required for certification.

c. Decertification: To decertify an individual who is no longer proficient in a task, erase the trainer's initials. For core tasks, erase the certifier's initials. Annotate 623a with reason for decertification.

d. Recertification: Task recertification requires some level of retraining. To recertify an individual on a previously certified task, erase the start date, completion date, trainee initials, and trainer initials. Recertify following the procedures in b(2) and b(3) above.

e. Transcription: When necessary, e.g., the STS/JQS is saturated, dirty, mutilated, etc., the supervisor may transcribe the data to a new STS/JQS. Following the transcription, annotate an AF Form 623a to explain the transcription actions. The supervisor will enter his or her name and initials

following the explanation. Give the old STS/JQS to the trainee to retain as training history. To transcribe data, the supervisor (or designated representative) will:

(1) Identify required tasks for current duty position by circling the applicable task number in the new STS/JQS.

(2) Have the trainee initial in the "trainee block" in the new STS/JQS.

(3) Initial in the trainer or certifier block as applicable in the new STS/JQS.

(4) For previous qualifications/certifications not required in current duty position, only transcribe the previous completion date. Ensure all completion dates are transcribed from the old STS/JQS to the new STS/JQS.

f. Tasks that are not included in the STS may be added to a local attachment, provided the same format as the STS is used. These attachments will be reviewed annually during the CFETP review to determine if these tasks should be added to the STS.

3. **Proficiency Code Keys.** The proficiency code key is used to indicate level of training and knowledge provided by resident training and career development courses.

4. Report unsatisfactory performance of individual course graduates using AF Form 1284 as prescribed in AFI 36-2201. Report inadequacies and suggested corrections to this STS to the 2M0XX AFCFM through the MAJCOM functional manager. All approved changes to this CFETP will be forwarded to 532 TRS/DOAT, 597 7th St, Vandenberg AFB, CA, 93437-5305.

This STS supersedes AFSC 2M0X3 STS in CFETP 2M0X3, Parts 1 - 2, 31 July 96.

MICHAEL E. ZETTLER, Lt General, USAF
DCS/Installations & Logistics

3 Atch
1. Common Msl & Spc Maint
2. ICBM Maint
3. Spacelift Maint

Trainee/Trainer/Certifier Identification Table

THIS BLOCK IS FOR IDENTIFICATION PURPOSES ONLY		
NAME OF TRAINEE		
PRINTED NAME (*LAST, FIRST, MIDDLE INITIAL*)	INITIALS (*WRITTEN*)	SSAN
PRINTED NAME OF TRAINING/CERTIFYING OFFICIAL AND WRITTEN INITIALS		
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	

SPECIALTY TRAINING STANDARD (STS)
AFSC 2M0X3
MISSILE AND SPACE SYSTEMS FACILITY SPECIALIST

TASK #	TASK / KNOWLEDGE ITEM AND TRAINING REFERENCE	3 Lvl CRSE	5 Lvl CDC	7 Lvl CRSE	7 Lvl CDC
1	***CAREER LADDER PROGRESSION***				
	TR: AFI 36-2101; 2M0X3 Career Field Education and Training Plan (CFETP)				
1a	Progression in career ladder 2M0X3	-	B	-	-
1b	Duties of AFSC 2M0X3	-	B	-	-
2	***AF OCCUPATIONAL SAFETY AND HEALTH (AFOSH) PROGRAM***				
	TR: AFI 91-X				
2a	Hazards of AFSC 2M0X3	A	-	-	-
	TR: AFI 91-301				
2b	Safety	A	-	-	-
	TR: TOs 00-25-245, 21-LG118A-2-10, 21M-LGM30G-2-10 (-1)				
2c	USAF Mishap Prevention Program	A	-	-	-
	TR: AFI 91-202; TO 31-1-141				
2d	Missile safety	A	-	-	-
	TR: AFI 91-107, 91-114, 91-202				
2e	Nuclear surety	A	-	-	-
	TR: AFI 91-104, 91-105, 91-202				
2f	Explosive safety	A	-	-	-
	TR: AFI 91-201, 91-202				
2g	Hazard report	A	-	-	-
	TR: AFI 91-202				
2h	Environmental compliance	-	-	-	-
2h(1)	Overview of hazardous waste	A	-	-	-
	TR: AFIs 32-7041, 32-7042; 40 CFR Part 261, 262, 29 CFR Part 1910				
2h(2)	Hazardous material	-	-	-	-
	TR: 49 CFR Part 107, 120, 172				
2h(2a)	Handler responsibilities	A	-	-	-
2h(2b)	Transportation requirements	A	-	-	-
2h(3)	Refrigerant certification **(See note 6)**	B	-	-	-
	TR: 1990 CAA Amendments, Section 608 (40 CFR Part 82)				
2h(4)	Impact on environment of Ozone Depleting Chemicals (ODCs)	A	-	-	-
	TR: 40 CFR Part 82				
2h(5)	Overview of Federal Facilities Compliance Act (FFCA)	A	-	-	-
	TR: FFCA; Federal Facilities Compliance Strategy EPA/130/4-89-003				

2h(6)	Overview of Environmental Compliance Assessment and Management Program	A	-	-	-
	TR: AFI 32-7045				
2h(7)	Overview of Air Force Pollution Prevention Program (P3)	A	-	-	-
	TR: AFI 32-7080				
2h(8)	Hazardous material pharmacy concept of operation	A	-	-	-
	TR: AFI 32-7086				
2h(9)	Hazardous communication	B	-	-	-
	TR: 29 CFR Part 1910; AFOSH 161-21				
2h(10)	Polychlorinated Biphenyls (PCBs)	A	-	-	-
	TR: 40 CFR Part 761				
3	***PUBLICATIONS***				
	TR: AFI 37-X; AFSPCI 21-0114				
3a	Use standard publications	a	B	-	-
3b	Technical order system	-	-	-	-
	TR: AFPD 21-3; TOs 0-1-01, 0-1-02, 00-5-1, 00-5-2				
3b(1)	Description	A	B	-	-
3b(2)	Use technical orders	3c	-	-	-
3b(3)	Initiate TO improvement report	A	B	-	-
3c	Use CEM	3c	B	-	-
	TR: AFSPCIND 0-7, AFSPCI 32-1009				
3d	Initiate CEM improvement reports	A	B	-	-
	TR: AFSPCIND 0-7, AFSPCI 32-1009				
4	***MAINTENANCE MANAGEMENT***				
	TR: AFPD 21-1; AFIs 21-114, 21-108, 38-101; AFSPCIs 21-0108, 21-0114				
4a	Functions and responsibilities of missile and space organizations	-	B	-	B
4b	Functions of missile/space maintenance units	-	B	-	B
4c	Deficiency reporting	-	A	-	B
	TR: TO 00-35D-54				
4d *	Hardness assurance program	A	B	-	-
	TR: AFI 32-1054; TOs 21-LG118A-2-10, 21M-LGM30G-2-31, 21M-LGM30G-2-10 (-1)				
4e	Improved Maintenance Management Program	-	B	-	B
	TR: Document #IMMP-SIOM, Vol 1 of 1, dated 21 Dec 95, Tutorials				
4f	Reliability and maintainability	-	-	-	B
	TR: AFPAM 80-24				
4g	Status reporting Force Management Information System (FMIS)	-	-	-	B
	TR: AFI 21-103; MCR 55-8; AFSPCI 21-1030				

5	***COMMON MAINTENANCE PRACTICES***				
	TR: TOs 00-25-234, 1-1A-8, 21-LG118A-2-10, 21M-LGM30G-2-10 (-1), 21M-LGM30G-2-31; AFI 32-1054				
5a	Use tools	3c	-	-	-
	TR: TOs 32-1-2, 32-1-101, 32-1-151, 32B14-3-1-101				
5b	Use aerospace hardware	b	-	-	-
	TR: TOs 1-1A-8, 1-1A-15				
5c	Corrosion identification	A	-	-	-
	TR: TO 1-1-691; AFSPCI 21-0105				
5d	RFI/EMI gaskets	-	-	-	-
	TR: TO 21M-LGM30F-112				
5d(1)	Inspect	3c	B	-	-
5d(2)	Repair	a	B	-	-
5e	Troubleshooting theory/techniques	-	B	-	C
	TR: TO 31-1-141 Series, Commercial Publication Althouse, Turnquist and Bracciano: Modern Refrigeration and Air Conditioning; Diesel Fundamentals or Diesel Technology, Service and Repair; Goodheart- Wilcox Company Inc.				
5f	Electrostatic Discharge (ESD) Procedures	-	-	-	-
5f(1)	Perform printed circuit board handling and storage procedures	3c	-	-	-
	TR: TO 00-25-234, Chapter 7				
5f(2)	Perform ESD control procedures	3c	-	-	-
	TR: TO 00-25-234, Chapter 7				
6	***SPACE AND MISSILE SYSTEMS TEST/INSPECTION PROCESSES***				
	TR: TOs 21M-LGM30G-1-17, 21M-LGM30G-1-18, 33D9-61-108-1				
6a	Test and evaluation	-	-	-	B
	TR: AFI 99-103				
6b	Simulated Electronic Launch Minuteman (SELM)	-	-	-	B
6c	Simulated Electronic Launch Peacekeeper (SELP)	-	-	-	B
7	***WS-118A SYSTEMS***				
	TR: AFIs 32-1062, 91-4, 32-5012; TOs 21- LG118A-6, 21-LG118A-2-10, 21-LG118A-2-11, 21-LG118A-2-28, 35E9-232-1, 35E9-3-265-1, 35D9-3-264-1,35M3-8-11-1, 36A13-31-1; CEMs 21-SM80X-2-21-X, 21-SM80X-2-26-X, 35R-1-X51-X, 35R-1-X81-X				
7a	Missile	A	-	-	-
7b	Launch Facility (LF)	-	B	-	-
7c	Guidance and control conditioning unit:	-	B	-	-
	TR: TOs 21-LG118A-2-6, 35E9-232-1, 36A13-31-1				
7d	Guidance and control conditioning unit test bench	-	B	-	-
	TR: TO 33D9-3-265-1				

7e	Guidance and control conditioning unit test set	-	B	-	-
	TR: TO 33D9-3-264-1				
7f	Elevator workcage/Maintenance Platform, Guided Missile	-	B	-	-
	TR: TO 21-LG118A-2-10				
7g	LF power distribution system	-	B	-	-
	TR: CEMs 21-SM80X-2-21-X, 21-SM80X-2-26-X, 35R-1-X51-X, 35R-1-X81-X				
7h	LF/MAF Environmental Control Systems	-	B	-	-
	TR: TOs 21-LG118A-2-7, 21-LG118A-2-7-1				
7h(1)	Emergency air conditioning subsystem/controls/alarms	-	B	-	-
7h(2)	Launch tube heating subsystem/controls/alarms	-	B	-	-
7i	LF waste disposal system	-	B	-	-
	TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-X				
8	***WEAPON SYSTEM (WS-133)***				
	TR: TO 21M-LGM30X-1-XX				
8a *	Launch Facilities	A	B	-	-
8b *	Missile Alert Facilities	A	B	-	-
8c *	Missile Support Base (MSB)	A	B	-	-
8d	Missile	A	-	-	-
9	***DELTA***				
	TR: AFSR 23-62; 1SLS/CCs History Book; 1 SLS/DOT Lesson Plans 500,501, 502, 503; MDA Delta II User Guide; JCWS SPIs 40-05-004, 40-05-032; NASA ULO Operations Handbook; Facilities Handbook; TM4-195-17, TM4-249-17				
9a	Mission	-	A	-	-
9b	Characteristics	-	A	-	B
9c	Propellants	-	-	-	B
9d	Propellant transfer systems	-	-	-	B
9e	Launch complex	-	-	-	-
9e(1)	Description	-	A	-	-
9e(2)	Mobile service tower	-	-	-	B
9e(3)	Environmental control	-	-	-	B
9e(4)	Hazardous gas detection	-	-	-	B
9e(5)	Breathing air system	-	-	-	B
9e(6)	Air conditioning units	-	-	-	B
9e(7)	Generator systems	-	-	-	B
9e(8)	Electrical distribution systems	-	-	-	B
9e(9)	Electrical motors	-	-	-	B
9e(10)	Cranes, hoists, and winch systems	-	-	-	B

9e(11)	Water and sewage systems	-	-	-	B
9e(12)	Compressed air system	-	-	-	B
10	***ATLAS II***				
	TR: Atlas DOD Mission Planner's Guide; AU-18 Space Handbook; Atlas Self Study Guide 93 (SSG93)				
10a	Mission	-	A	-	-
10b	Characteristics	-	A	-	B
10c	Propellants	-	-	-	B
10d	Propellant transfer systems	-	-	-	B
10e	Launch complex	-	-	-	-
10e(1)	Description	-	A	-	-
10e(2)	Mobile service tower	-	-	-	B
10e(3)	Environmental control	-	-	-	B
10e(4)	Hazardous gas detection	-	-	-	B
10e(5)	Breathing air system	-	-	-	B
10e(6)	Air conditioning units	-	-	-	B
10e(7)	Generator systems	-	-	-	B
10e(8)	Electrical distribution systems	-	-	-	B
10e(9)	Electrical motors	-	-	-	B
10e(10)	Cranes, hoists, and winch systems	-	-	-	B
10e(11)	Water and sewage systems	-	-	-	B
10e(12)	Compressed air system	-	-	-	B
11	***TITAN***				
	TR: Titan II SLV Subsystems and Titan IV Propulsion Systems (Aerojet Co.)				
11a	Mission	-	A	-	-
11b	Characteristics	-	A	-	B
11c	Propellants	-	-	-	B
	TR: MMC SG VT4-830 and VT II-830				
11d	Propellant transfer systems	-	-	-	B
	TR: MMC SG VT4-830 and VT II-830				
11e	Launch complex	-	-	-	-
11e(1)	Description	-	A	-	-
	TR: MMC SG 4-200, 1001				
11e(2)	Mobile service tower	-	-	-	B
11e(3)	Environmental control	-	-	-	B
	TR: MMC SG VT 4-851 and VT2-852				
11e(4)	Hazardous gas detection	-	-	-	B
11e(5)	Breathing air system	-	-	-	B

11e(6)	Air conditioning units	-	-	-	B
	TR: MMC SG VT 4-850/853, VTII 850/853				
11e(7)	Generator systems	-	-	-	B
11e(8)	Electrical distribution systems/UPS	-	-	-	B
	TR: MMC SG VT 4-840, VTII 840				
11e(9)	Electrical motors	-	-	-	B
11e(10)	Cranes, hoists, and winch systems	-	-	-	B
11e(11)	Water and sewage systems	-	-	-	B
	TR: MMC SG VT 4-855, VT2- 855				
11e(12)	Compressed air system	-	-	-	B
12	***ENVIRONMENTAL CONTROL SYSTEMS***				
	TR: TOs 21M-LGM30X-2-7-X, 21-LG118A-2-7; Commercial Publication Althouse, Turnquist and Bracciano, Modern Refrigeration and Air Conditioning				
12a *	Refrigeration principles	B	B	-	C
12b *	Refrigeration systems components	B	B	-	C
12c *	Interpret schematics/flow/wiring diagrams	2b	B	-	C
12d *	Operation of control/monitoring devices	B	B	-	C
12e *	Heat transfer process in environmental control systems	B	B	-	C
13	***POWER GENERATION AND DISTRIBUTION SYSTEMS***				
	TR: AFIs 32-1063, 32-5009, 32-5012; CEMs 21-SM80X-2-21-X, 21-SM80X-2-26-X, 35R-1-X51-X, 35R-1-X81-X, 21-SM80-6 (Vol XX); TOs 21M-LGM30G-2-11, 21M-LGM30X-2-11-(1); National Electric Code				
13a *	Principles	B	B	-	C
13b	Components	-	B	-	C
13c *	Interpret schematics/wiring diagrams	2b	B	-	C
13d	Control and monitoring devices	-	B	-	C
14	***INTERNAL COMBUSTION ENGINE SYSTEMS***				
	TR: AFIs 32-1062, 32-5009, 32-5012; Diesel Fundamentals or Diesel Technology, Service and Repair, Goodheart-Wilcox Company Inc.				
14a *	Principles	B	B	-	C
14b	Components	-	B	-	C
14c *	Interpret flow diagrams	2b	B	-	C
14d	Control and monitoring devices	-	B	-	C
15	***OPERATION AND MAINTENANCE OF WS-133 SYSTEMS***				
	TR: TOs 21M-LGM30F-6, 21M-LGM30X-2-7-X, 21M-LGM30X-2-11, 21M-LGM30X-2-11-X; CEMs 21-SM80-6 (Vol XX), 21-SM80X-2-20-X, 21-SM80X-2-21-X, 21-SM80X-2-26-X, 35R-1-X51-X, 35R-1-X81-X, 21-SM80X-2-24-X				
15a	LF/MAF diesel engines	-	B	-	-

15a(1)	Engine fuel oil system	B	B	-	-
15a(1a)	Perform quadrennial periodic inspection	2b	-	-	-
15a(1b)*	Troubleshoot	2b	-	-	-
15a(1c)	Repair	2b	-	-	-
15a(1d)	Engine governor/injection pump/injectors	B	B	-	-
15a(1d1)	Repair	2b	-	-	-
15a(2)	Engine lube oil system	B	B	-	-
15a(2a)	Perform biennial periodic inspection	2b	-	-	-
15a(2b)	Perform quadrennial periodic inspection	2b	-	-	-
15a(2c)	Troubleshoot	2b	-	-	-
15a(2d)	Repair	B	-	-	-
15a(3)	Engine cooling system	B	B	-	-
15a(3a)	Perform biennial periodic inspection	3c	-	-	-
15a(3b)	Repair	2b	-	-	-
15a(4)	Engine safety/alarm devices	B	B	-	-
15a(4a)	Perform biennial periodic inspection	2b	-	-	-
15a(4b)*	Troubleshoot	2b	-	-	-
15a(4c)	Repair	2b	-	-	-
15a(5)	Engine intake/exhaust system	B	B	-	-
15a(5a)	Perform biennial periodic inspection	2b	-	-	-
15a(6)	Engine start batteries/charging systems	B	B	-	-
15a(6a)	Perform biennial periodic inspection	3c	-	-	-
15a(6b)*	Troubleshoot	2b	-	-	-
15a(7)	Engine starting/stopping devices	B	B	-	-
15a(7a)*	Troubleshoot	2b	-	-	-
15a(7b)	Perform DEU Operation	3c	-	-	-
15b	LF/MAF power generation system	-	B	-	B
15b(1)	Generator/exciter/voltage regulator	B	B	-	-
15b(2)	Automatic switching unit/transfer switches/switch gear	B	B	-	-
15b(2a)*	Troubleshoot	2b	-	-	-
15b(3)	Engine/generator control panel	B	B	-	-
15b(3a)*	Troubleshoot	2b	-	-	-
15b(4)	Minuteman power processor	B	B	-	-
15b(5)	Power generation/distribution system	B	B	-	-
15b(5a)	LF power distribution system	B	B	-	-
15b(5b)	MAF power distribution system	B	B	-	B
15b(6)	Minuteman power processor battery/charger	-	-	-	-
15b(6a)	Perform biennial periodic inspection	3c	-	-	-

15c	LF/MAF environmental control system	-	B	-	-
15c(1)	LSB Heating subsystem	B	B	-	-
15c(2)	Support/equipment building ventilation air subsystem/controls/alarms	B	B	-	-
15c(2a)	Perform biennial periodic inspection (LF)	2b	-	-	-
15c(2b)*	Troubleshoot	2b	-	-	-
15c(2c)	Repair	2b	-	-	-
15c(3)	Refrigerant subsystem	B	B	-	-
15c(3a)	Perform biennial periodic inspection (LF)	2b	-	-	-
15c(3b)*	Troubleshoot	2b	-	-	-
15c(3c)	Repair	2b	-	-	-
15c(4)	Brine sub system	B	B	-	-
15c(4a)	Perform biennial periodic inspection (LF)	2b	-	-	-
15c(4b)*	Troubleshoot	2b	-	-	-
15c(5)	Brine chiller control panel	B	B	-	-
15c(5a)	Perform biennial periodic inspection (LF)	3c	-	-	-
15c(5b)*	Troubleshoot	2b	-	-	-
15c(5c)	Repair	2b	-	-	-
15c(6)	Air conditioning subsystem/controls/alarms	B	B	-	-
15c(6a)	Perform biennial periodic inspection (LF)	3c	-	-	-
15c(6b)*	Troubleshoot	2b	-	-	-
15c(6c)	Repair	2b	-	-	-
15c(7)	Master control panel/controls	-	B	-	-
15c(8)	Emergency air conditioning subsystem/controls/alarms	B	B	-	-
15c(8a)	Perform biennial periodic inspection (LF)	2b	-	-	-
15c(8b)*	Troubleshoot	2b	-	-	-
15c(8c)	Repair	2b	-	-	-
15c(9)	Makeup air subsystem/controls/alarms	B	B	-	-
15c(9a)	Perform biennial periodic inspection (LF)	3c	-	-	-
15c(9b)*	Troubleshoot	2b	-	-	-
15c(10)	Instrument air subsystem	B	B	-	-
15c(10a)	Perform biennial periodic inspection	3c	-	-	-
15c(10b)*	Troubleshoot	2b	-	-	-
15c(10c)	Repair	2b	-	-	-
15c(11)	Launch tube heating subsystem/controls/alarms	B	B	-	-
15c(11a)	Perform biennial periodic inspection	2b	-	-	-
15c(11b)*	Troubleshoot	2b	-	-	-
15c(11c)	Repair	2b	-	-	-

15c(12)	LCC heater/controls	-	B	-	-
15d	LF waste disposal system	A	B	-	-
15d(1)	Sump pump 102/601	A	-	-	-
15d(1a)	Perform biennial periodic inspection	2b/b	-	-	-
15d(1b)*	Troubleshoot	2b/b	-	-	-
15d(1c)	Repair	2b/b	-	-	-
15e	LCC oxygen regeneration unit	-	B	-	-
15f *	MAF ventilation safety system	A	B	-	-
15g *	LF/MAF shock attenuation system	A	B	-	-
15h	LCSB/LCEB/LCC monitor/alarm system	A	B	-	-
15i	LF/MAF emergency storage batteries	-	B	-	-
15i(1)	Perform annual periodic inspection	3c	-	-	-
16	***EQUIPMENT***				
	TR: TOs 33-1-19, 33A1-9-34-1, 33A1-12-871-1, 33A1-12-1199-1, 33DA98-15-1, 33D7-22-34-11, 33D9-17-73-1, 33D9-17-82-1, 33D9-17-81-2, 33A1-12-1198-1, CEM 21-SM80X-2-21-X, Applicable Manufacturers Operating Manuals				
16a	Use ECS test equipment	3c	B	-	-
16b *	Use electronic/electrical circuit portable test equipment	3c	B	-	-
16c *	Use refrigerant recycler/reclaimer	2b	B	-	-
16d	Glycol recycler	-	B	-	-
17	***TUBING MAINTENANCE***				
	TR: TOs 00-25-234, 31-10-7, 34W4-1-5, 34W4-1-7, 34W4-1-8, 21M-LGM30F-12				
17a	Flare copper tubing	-	B	-	-
17b	Swage copper tubing	-	B	-	-
17c	Open flame soldering	-	B	-	-
18	***MSB MAINTENANCE***				
	TR: TO 21M-LGM30F-6; Applicable Manufacturers Operating Instructions				
18a	Prepare brine solution	-	B	-	-
	TR: TO 21M-LGM30X-2-7-X				
18b	Prepare chromate dioxin solution	-	B	-	-
	TR: TO 35E9-35-22				
18c	Emergency storage battery reconditioning	-	B	-	-
	TR: TO 35M1-1-101				
18d	Guidance and control liquid cooling bench test and repair set	-	B	-	-
	TR: TO 33D9-17-81-2				
18e	Transporter erector	-	B	-	-
	TR: TOs 35C2-3-493-1, 35D3-11-52-2, 35D3-11-52-4, 35E9-266-1				

18f	Portable air conditioner	-	B	-	-
	TR: TOs 35D3-11-52-2, 35C2-3-493-1, 35E9-270-1,				
18g	Support vans	-	B	-	-
	TR: TOs 36A12-24-3-1, 35D4-7-4-2				
18h	PMT van	-	B	-	-
	TR: TOs 35C2-3-498-1, 35E9-272-1, 36A9-8-56-1, 36Y16-25-1				
18i	Payload transporter	-	B	-	-
	TR: TOs 36A9-8-49-1, 36A9-58-1				
18j	Elevator workcage/Maintenance Platform, Guided Missile	-	B	-	-
	TR: TOs 35A4-2-31-1, 35A4-4-9-1				
18k	Guidance and control liquid cooler system	-	B	-	-
	TR: TO 33D9-17-89-1				
18l	Hydraulic pipe pusher	-	B	-	-
	TR: TO 35M27-3-8-1				
18m	WCPS/UPS	-	B	-	-
	TR: TOs 21-LG118A-2-16, 21-LGM30F-6, 21M-LGM30G-2-16, 31X8-2-2-2				
18n	Brine chiller test stand	-	B	-	-
	TR: TOs 21M-LGM30X-2-7-X, 35D36-1-102				
19	***LAUNCH FACILITY PROCEDURES***				
	TR: TOs 21M-LGM30G-2-10, 21M-LGM30F-2-19, 21M-LGM30G-2-28(-1)				
19a	Enter LSB	1b	-	-	-
19b	Exit LSB	1b	-	-	-
19c	Enter LER **(See note 5)**	1b	-	-	-
19d	Exit LER	1b	-	-	-
19e	Perform emergency shutdown	1b	-	-	-
19f	Evacuate launch facility for EWO launch condition	1b	-	-	-
19g	Perform emergency electrical isolation of LSB	1b	-	-	-
19h	Perform LF hostile securing	1b	-	-	-
19i	Personnel access system	A	-	-	-
19j	Raise/lower Equipment	1b	-	-	-
20	***MISSILE ALERT FACILITY (MAF) MANAGEMENT***				
	TR: CEM 21-SM80-19, Volume (X)				
20a	General MAF Management Procedures	-	-	-	B
	TR: AFSPCI 10-204				
20b	MAF emergency response/rescue equipment inspection/operation	-	-	-	B
	TR: TO 14S5-32-1, Applicable Manufacturers Operating Manuals				
20c	Emergency procedures	-	-	-	B

20d	Facility equipment	-	-	-	B
20d(1)	Water system	-	-	-	B
	TR: CEMs 21-SM80X-2-24-X, 35R-1-X61-X				
20d(2)	Heating/HVAC systems	-	-	-	B
	TR: CEMs 21-SM80X-2-20-X, 35R-1-X41-X				
20d(3)	Fuel management/systems	-	-	-	B
	TR: AFIs 23-201, 23-204; CEMs 21-SM80X-2-26-X, 35R-1-X81-X				
20d(4)	MAFSB Power Generation/Distribution Systems	-	-	-	B
	TR: CEMs 21-SM80X-2-21-X (Vol II), 35R-1-X51-X				
20d(5)	Communications Systems (ISST)	-	-	-	B
	TR: TOs 21M-LGM30F-1-22, 21MLGM-30F-1-23				
	NOTE 1: Items in column 1 marked with an asterisk (*) are tasks that are trained in resident wartime course				
	NOTE 2: Applicable AFSC job oriented safety training is integrated throughout the courses				
	NOTE 3: Applications of the USAF technical data systems are integrated throughout the courses				
	NOTE 4: Mission Ready Airman tasks ("3c" level) will be certified by the technical school in the applicable attachment (identified with a "3" in the core task column)				
	NOTE 5: This task requires initial shotgun qualification				
	NOTE 6: Universal taught; Type I and Type II certification required to graduate				

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

							CERTIFY
		CORE	START	COMP	TRAINEE	TRAINER	OFFICIAL
ITEM #	**TASK / KNOWLEDGE ITEM**	TASK	DATE	DATE	INITIALS	INITIALS	INITIALS
1	***AF OCCUPATIONAL SAFETY AND HEALTH (AFOSH) PROGRAM***						
	TR: AFI 91-X						
1a	Use safety practices when working with weapon system equipment						
	TR: TO applicable to the weapon system						
1b	Report hazards						
1c	Inspect safety equipment for serviceability						
	TR: TOs 00-25-245, 21M-LGM30G-2-10 (-1), 21-LG118A-2-10						
1d	Comply with hazardous material safety requirements						
	TR: AFOSH STD 161-21						
2	***PUBLICATIONS***						
2a	Use standard publications						
	TR: AFI 37-X, AFSPCI 21-0114						
2b	Use technical orders	3					
	TR: AFPD 21-3; TO 00-5-1, 00-5-2						
2c	Initiate TO improvement report						
	TR: TO 00-5-1						
2d	Use supply publications/Illustrated Parts Breakdown (IPB)						
	TR: AFMAN 67-1						
2e	Use Civil Engineering Manuals (CEM)						
	TR: AFSPCI 32-1009						
2f	Initiate CEM improvement report						
	TR: AFSPCI 32-1009						
3	***MAINTENANCE MANAGEMENT***						
	TR: AFPD 21-1; AFI 21-114, 21-108; AFSPCI 21-0114; ACCI 21-101						
3a	Complete Maintenance Data Collection (MDC) forms						
	TR: TOs 00-20-2, 21M-LGM30F-06-X; CEM 21-SM80-06, 21M-AGM86-06, 21-AG129-06						
3b	Use Core Automated Management System (CAMS)						
	TR: AFCSM 21-556 thru 21-579						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

3c	Use Improved Maintenance Management Program (IMMP)						
	TR: Applicable Software and System Manuals						
4	***TOOLS AND HARDWARE***						
	TR: TOs 00-25-234, 1-1A-8, 21-LG118A-2-10, 21-LG118A-12, 21M-LGM30F-12, 21M-LGM30G-2-31, 21M-LGM30G-2-10(-1)						
4a	Use tools	3					
	TR: TOs 32-1-2, 32-2-101, 32-1-151, 32B14-3-1-101						
4b	Use aerospace hardware						
	TR: TO 1-1A-8, 1-1A-14, 1-1A-15						
5	***SUPERVISION AND TRAINING***						
	TR: AFI 36-2201; AFSPCI 21-0114; ACCI 10-204						
5a	Supervision						
5a(1)	Orient new personnel						
5a(2)	Conduct predispatch maintenance briefings						
5a(3)	Coordinate activities of specialists						
5a(4)	Plan work assignments						
5a(5)	Schedule work assignments						
5a(6)	Counsel personnel						
	TR: AFI 36-2907						
5a(7)	Evaluate work performance of subordinates						
	TR: AFI 36-2403						
5a(8)	Initiate action to correct substandard performance of subordinates						
	TR: AFI 36-2907						
5a(9)	Evaluate technical school graduates						
	TR: AFI 36-2201						
5b	Training						
5b(1)	Plan and supervise training programs						
5b(2)	Conduct qualification training						
	TR: AETC OJT Trainer Course						
5b(3)	Prepare lesson plans						
5b(4)	Maintain training records						
5b(5)	Certify trainee qualifications						
	TR: AETC OJT Certifier Course						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

6	***GENERAL MAINTENANCE***						
6a	Operate portable heaters						
	TR: TO 35E7-2-11-11, Applicable manufacture's operating instructions						
6b	Operate portable pumps						
	TR: Applicable manufacture's operating instructions; TOs 21M-LGM30G-2-10 (-1), 21-LG118A-2-10						
6c	Tubing maintenance						
	TR: TOs 1-1A-8						
6c(1)	Flare tubing						
6c(2)	Swage tubing						
6d	Solder/Solderless connectors						
	TR: TOs 00-25-234, 21M-LGM30F-12, 31-10-7, 1-1A-14, 1-1A-15, 34W4-1-8, 34W4-1-5, 34W4-1-7, 31-1-141-15						
6d(1)	Soft soldering						
6d(2)	Silver soldering						
6d(3)	Electrical soldering						
6d(3a)	Perform basic soldering/desoldering procedures						
6d(3b)	Perform soldering/desoldering on printed circuit boards						
6d(4)	Solderless connectors						
6d(4a)	Assemble solderless crimp connectors						
6d(4b)	Assemble solderless multipin connectors						
6e	Pneumatics						
	TR: TOs 00-25-223, 00-25-229, 1-1A-8, 33-1-19, 42B5-1-2, 42E1-1-1, 42E2-1-2, 44H3-1-3						
6e(1)	Remove components						
6e(2)	Install components						
6e(3)	Read pneumatic flow diagrams						
6e(4)	Replace hoses						
6e(5)	Replace tubing						
6e(6)	Replace seals						
6e(7)	Fabricate tubing						
6e(8)	Fabricate hoses						
6f	Hydraulics						
	TR: TO 00-25-223, 00-25-229, 1-1A-8, 33-1-19, 42B2-1-3, 42E1-1-1, 42E2-1-2, 44H3-1-3						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

6f(1)	Remove components						
6f(2)	Install components						
6f(3)	Read hydraulic flow diagrams						
6f(4)	Replace hoses						
6f(5)	Replace tubing						
6f(6)	Replace seals						
6f(7)	Fabricate tubing						
6f(8)	Fabricate hoses						
6g	Standard Test Equipment						
	TR: TO 31-1-141 Series, 33A1 Series; Applicable owner/user manuals						
6g(1)	Use analog multimeters	3					
6g(2)	Use bridge meters						
6g(3)	Use counters						
6g(4)	Use digital multimeters	3					
6g(5)	Use modulation meters						
6g(6)	Use oscilloscopes						
6g(7)	Use power meters						
6g(8)	Use power supplies						
6g(9)	Use signal generators						
6g(10)	Use voltmeters						
6g(11)	Use megohmeters						
6g(12)	Use bonding meter						
6h	Perform operator maintenance on weapon system test equipment						
	TR: TO 33-1-27						
6i	General shop practices						
	TR: TO 00-25-234, 1-1A-14, 1-1A-15, 33D9-61-58-2, 1-1A-1, 1-1A-8						
6j	General Maintenance						
6j(1)	Repair equipment panels and cases						
6j(2)	Perform safety wiring						
6j(3)	Repair wiring						
6j(4)	Repair general connectors						
6j(5)	Repair shielded and coaxial connectors						
6j(6)	Perform cable binding and lacing						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

6j(7)	Repair crimped electrical connections						
6j(8)	Qualify solderless wire wrapping Tool Kit (TK-148/g)						
6j(9)	Perform wire wrapping						
6j(10)	Perform systematic troubleshooting						
6j(11)	Perform electronic part replacement and repair						
6j(12)	Repair electrical contact strips						
6j(13)	Perform printed circuit board handling and storage procedures	3					
6k	Perform electrostatic discharge control procedures	3					
6l	Preventive maintenance						
6l(1)	Perform visual inspections						
6l(2)	Clean electronic equipment						
6m	Emergency breathing apparatus						
	TR: TO 14P4-9-31, 14P4-10-1, 14S5-30-2, 14S5-32-114S5-11-11, 14S5-16-1, 14S5-18-1, 14P5-3-1, 14S5-29-1, 14S5-19-11						
6m(1)	Perform periodic maintenance						
6m(2)	Troubleshoot						
6m(3)	Repair						
6m(4)	Operate						
6m(5)	Self Contained Atmospheric Protective Ensemble (SCAPE)						
	TR: Local training course						
6m(5a)	Describe						
6m(5b)	Checkout/Operate						
6m(6)	Emergency response equipment						
	TR: TOs 21M-LGM30G-2-33, 21-LG118A-2-32, OO-ALC 91-1, Manufacturer's guide, wing emergency response plan						
6m(6a)	Level A suit						
6m(6a1)	Inspect						
6m(6a2)	Use						
6m(6b)	Air skid						
6m(6b1)	Inspect						
6m(6b2)	Service						
6m(6b3)	Operate						
6n	Bench stock items						
	TR: AFMAN 67-1; AFSPCI 21-0114; ACCI 21-101						
6n(1)	Issue						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

6n(2)	Inventory						
6n(3)	Maintain						
6o	Electronic Principles						
	TR: TO 31-1-141 Series						
6o(1)	Isolate faulty components						
6o(1a)	Basic circuits						
6o(1b)	Resistors						
6o(1c)	Relays/solenoids						
6o(1d)	Capacitors						
6o(1e)	Semi-conductors						
6o(1f)	Inductors						
6o(1g)	Transformers						
6p	RFI / EMI Gaskets						
	TR: TO 21M-LGM30F-112						
6p(1)	Inspect	3					
6p(2)	Repair						
6q	Terminal Swagger Kit						
	TR: TO 33A2-16-3-1						
6q(1)	Operate						
6q(2)	Service						
6r	Portable cable terminal pull tester						
	TR: TO 33A8-4-6-1						
6r(1)	Operate						
6r(2)	Service						
7	***CRANE LORAINE/DEVAULT/WARREN/NATIONAL***						
	TR: TOS 36C-5-15-1, 35D36-1-102, 21M-LGM30G-2-18-3, 35D36-2-2, Owner's Manuals/LJG 20 AF-95-002, AFOSH 91-46						
7a	Inspect						
7b	Repair components						
7c	Troubleshoot components						
7d	Proofload						
8	***VEHICLE AND EQUIPMENT CONTROL***						
	TR: AFSPCI 21-0114						
8a	Perform preoperational checkout of						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

8a(1)	Payload Transporter (PT)						
	TR: TOs 36A9-8-49-1, 21M-LGM30G-2-33, 36A9-8-58-1						
8a(2)	Mechanical Maintenance Truck						
	TR: TOs 21M-LGM30G-2-10 (-1), 35D4-7-4-2, 36A12-24-3-1						
8a(3)	Missile Guidance and Control Set Support Truck						
	TR: TOs 21-LG118A-2-10, 21-LG118A-2-34, 36A13-31-1						
8a(4)	Periodic Maintenance Van						
	TR: TO 36A9-8-56-1						
8b	Operate hoist in						
8b(1)	Payload Transporter						
	TR: TOs 36A9-8-49-1, 21M-LGM30G-2-33, 36A9-8-58-1						
8b(2)	Mechanical Maintenance Truck						
	TR: TOs 21M-LGM30G-2-10 (-1), 35D4-7-4-2, 36A12-24-3-1						
8b(3)	Missile Guidance and Control Set Support Truck						
	TR: TOs 21-LG118A-2-10, 21-LG118A-2-34, 36A13-31-1						
8b(4)	Periodic Maintenance Van						
	TR: TO 36A9-8-56-1						
8c	Forms/records						
	TR: TOs 00-20-1, 00-20-2, 00-20-6, 00-20B-5, 00-25-245, 33D9-68-30-1, 36-1-58						
8c(1)	Initiate						
8c(2)	Maintain						
8d	Vehicles						
8d(1)	Perform daily inspections of						
	TR: AFI 24-301						
8d(1a)	General purpose vehicles						
	TR: TO 36-1-23						
8d(1b)	Special purpose vehicles						
	TR: TOs 35D4-7-4-2, 36A9-8-49-1, 36A12-24-3-1, 36A13-31-1, 36A9-8-58-1						
8d(2)	Track vehicle status/location						
8d(3)	Schedule vehicles for inspection/repair						
8e	Equipment						
8e(1)	Store/Issue equipment						
8e(2)	Track equipment status/location						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

8f	Nitrogen bottles						
	TR: TO 36A9-8-49-1, 36A9-8-58-1, 42B5-1-1-2						
8f(1)	Install in purge manifold						
8f(2)	Remove from purge manifold						
8f(3)	Drain						
8g	Perform self test on						
8g(1)	Multimeter						
	TR: TO 33A1-12-2-1, 33A1-12-933-1, 33A1-12-1059-1; Applicable owner/user manual						
8g(2)	Explosive set circuitry test set						
	TR: TO 33D9-38-15-1, 33D9-38-15-21						
8h	Cylinder gauge assembly						
	TR: TO 42B-1-12						
8h(1)	Connect						
8h(2)	Operate						
8i	Configure vehicles with equipment for the following:						
	TR: Applicable weapon system TO; configuration load lists						
8i(1)	MMT dispatches						
8i(2)	EMT dispatches						
8i(3)	FMT dispatches						
8i(4)	PNEU dispatches						
8j	Equipment recovery						
	TR: TO 00-24-245, 1-1A-8, 00-25-234, 11N-HRV-5022-2						
8j(1)	Inspect equipment						
8j(2)	Repair equipment						
8j(3)	Process equipment						
9	***TRAINER MAINTENANCE OPERATION***						
9a	Launch Facility trainer						
9a(1)	AN/GSQ-T8 and AN/GSQ-T9						
	TR: TO 43D2-3-27-1						
9a(1a)	Perform startup, shutdown, emergency shutdown, and						
	startup after inadvertent shutdown						
9a(1b)	Perform inspection and lubrication of trainer						
9a(1c)	Perform checkout, trouble analysis and repair of the following trainer unique equipment						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

9a(1c1)	Security system						
9a(1c2)	OGE power and systems						
9a(1c3)	Communication system						
9a(1c4)	Instructor control panel						
9a(1c5)	Ground G&C liquid cooling system						
9a(1c6)	Distribution box						
9a(1c7)	Simulated environmental control system						
9b	AN/GSQ-T10, AN/GSQ-T13, and AN/GSQ-T41						
	TR: TO 43D2-3-81-1, 43D2-3-55-1						
9b(1a)	Perform startup, shutdown, emergency shutdown, and startup after inadvertent shutdown						
9b(1b)	Perform inspection and lubrication of trainer						
9b(1c)	Perform checkout, trouble analysis and repair of the following trainer unique equipment						
9b(1c1)	Security system						
9b(1c2)	OGE power and systems						
9b(1c3)	Communication system						
9b(1c4)	Instructor control panel						
9b(1c5)	Ground G&C liquid cooling system						
9b(1c6)	GMSR system						
9b(1c7)	Distribution box						
9c	Launch Facility trainer (A/F 24A-T2)						
	TR: TO 43D2-10-3-1, 43D2-10-3-2						
9c(1)	Inspect trainer						
9c(2)	Repair trainer						
9c(3)	Lubricate trainer						
9c(4)	Perform startup, shutdown and emergency shutdown						
9d	Launch Facility operational support equipment (AF 24A-T4)						
	TR: TO 43D2-10-3-1, 43D2-10-3-2						
9d(1)	Inspect						
9d(2)	Repair						
9d(3)	Perform startup, shutdown and emergency shutdown						
9e	Training guided missile set (A/E37A-T47)						
	TR: TO 43D2-3-18-1						
9e(1)	Perform checkout, trouble analysis, and repair of trainer						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

9e(2)	Perform inspections						
9f	Perform checkout, trouble analysis, and repair of code change verifier set (AN/DJW-36T1A)						
	TR: TO 43D2-3-18-1						
9g	Missile Guidance Set trainer (AN/DJW-36T1)						
	TR: TO 43D2-3-73-1						
9g(1)	Perform checkout, trouble analysis, and repair						
9g(2)	Perform inspections						
9h	Propulsion system rocket engine trainer (A/A44A-4T1)						
	TR: TO 43D2-3-72-1						
9h(1)	Perform checkout, trouble analysis, and repair						
9h(2)	Perform inspections						
9i	Control monitor procedures trainer (AN/GSQ-T46/T47/T48/T49)						
	TR: TO 43D2-3-93-1						
9i(1)	Operate trainer						
9i(2)	Perform installation, adjustment, checkout, trouble analysis, inspection, and repair						
9j	Environmental control system/power procedures trainer(A/F37FU-T19/T22/T24/T25)						
	TR: TO 43D2-3-84-1, 43D2-3-89-1, 43D2-3-91-1, 43D2-3-92-1						
9j(1)	Perform startup, shutdown, and emergency shutdown						
9j(2)	Perform checkout, trouble analysis, repair, adjustment, and inspection of the following trainer unique equipment						
9j(2a)	Instructor control panel						
9j(2b)	Intercommunication system						
9j(2c)	Load bank						
9j(2d)	Simulated electronic rack						
9j(2e)	DC power supply PS-500						
9j(2f)	Transfer control panel						
9j(3)	Perform checkout trouble analysis, repair, adjustment, and inspection of trainer unique circuitry/mechanical devices						
9k	Perform checkout, trouble analysis, and repair of Minuteman III reentry system trainer (A/E32U-T4)						
	TR: TO 43D2-3-67-1						
9l	Missile guidance and control set (P/N 14900-201-1)						
	TR: TO 43D32-2-3-1						
9l(1)	Inspect						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

9l(2)	Repair						
9m	Operate digital computer system model PC380-AA						
	TR: TO 43D2-10-3-1, 43D2-10-3-2						
9n	Sump pump trainers, Minuteman/Peacekeeper (A/F 374-T25)						
	TR: CEM 21-SM80B-2-24-4, 21-LG118A-2-28, 43D2-3-92-1, 43D2-3-97-1, 43D2-3-84-1						
9n(1)	Inspect/operate						
9n(2)	Perform checkout						
9n(3)	Troubleshoot						
9n(4)	Repair						
9o	Third Stage Trainer						
	TR: TO 21MLGM30F-2-17-5						
9o(1)	Checkout						
9o(2)	Troubleshoot						
9o(3)	Repair						
9o(4)	Inspect						
9p	Operate Code Change Verifier Simulator (SM-876/G)						
	TR: TO 43D2-3-18-1						
10	***QUALITY ASSURANCE***						
10a	Technical data						
	TR: AFPD 21-3; AFSPCIs 10-204, 21-0114, 21-0108, ACCI 21-101, TOs 00-5-1, 00-5-2						
10a(1)	Review/process AFTO Forms 22 and AFSPC Form 272						
10a(2)	Review all new and revised technical data and standard publications for completeness and technical accuracy						
10a(3)	Review supplements and maintenance OIs for accuracy, intent, and necessity						
10b	TCTO, MCLs, and modifications						
	TR: AFSPCIs 10-204, 21-0108, 21-0114, ACCI 21-101						
10b(1)	Review for applicability, training, supplies, and equipment requirements						
10b(2)	Determine sampling size and perform random inspections						
10b(3)	Conduct final review of TCTO/MCLs submitted by Logistics Group						
10c	Management inspections						
	TR: AFSPCIs 10-204, 21-0108, 21-0114, ACCI 21-101						
10c(1)	Conduct activity inspections						
10c(2)	Conduct special inspections						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

10d	Hardware inspections						
	TR: AFSPCIs 10-204, 21-0114						
10d(1)	Conduct hardware equipment inspection						
10d(2)	Conduct hardware acceptance inspection						
10e	Proficiency evaluations						
	TR: AFSPCIs 10-204, 21-0108, 21-0114						
10e(1)	Conduct personnel proficiency evaluations						
10e(2)	Conduct proficiency verification evaluations						
10e(3)	Conduct trainer proficiency evaluations						
10e(4)	Conduct RIVET MILE observations						
10f	Inspection reports						
	TR: AFSPCIs 10-204, 21-0108, 21-0114, ACCI 21-101						
10f(1)	Document inspections						
10f(2)	Prepare inspection reports						
10g	Evaluate deferred discrepancies						
	TR: AFSPCIs 10-204, 21-0114						
10h	Training						
	TR: AFSPCI 21-0114						
10h(1)	Conduct MEP orientation course						
10h(2)	Conduct DR course						
10h(3)	Conduct production inspector course						
10h(4)	Conduct technical data course						
	TR: TO 00-5-1, 00-5-2						
10i	Deficiency Reporting						
	TR: TO 00-35D-54; AFMAN 67-1						
10i(1)	Identify deficiencies						
10i(2)	Process deficiency reports						
11	**MISSILE MAINTENANCE OPERATIONS CENTER (MMOC)**						
11a	Understand security enhancement procedures and site security procedures						
	TR: AFSPCIs 21-0114, 31-1101						
11b	Use the maintenance priority system						
	TR: AFSPCI 21-0114						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

11c	Accept, evaluate, and respond to reports from LFs/MAFs						
	TR: TOs 21M-LGM30X-2-1-X, 21-LG118A-2-1						
11d	Monitor, update, and delete maintenance data for priorities 1 - 4						
	TR: AFSPCI 21-0114; TO 33D9-61-76-1						
11e	Coordinate with Material Control on priority changes, PMCS, NMCS, and MICAP conditions						
	TR: AFSPCI 21-0114						
11f	Coordinate and document maintenance on and off base						
	TR: AFSPCI 21-0114						
11g	Coordinate unscheduled dispatches						
	TR: AFSPCI 21-0114; TO 33D9-61-76-1						
11h	Monitor critical equipment and vehicle status						
	TR: AFSPCI 21-0114; TO 33D9-61-76-1						
11i	Coordinate and document cannibalization procedures						
	TR: TO 00-2-2, 33D9-61-76-1; AFSPCI 21-0114						
11j	Perform EWO actions						
	TR: AFSPCI 21-0114; SRR OPLAN 55; Local wing OPLANs						
11j(1)	Senior controller						
11j(2)	Weapons system controller						
11k	Use procedural, situational, and EWO checklists to						
	TR: AFSPCI 21-0114						
11k(1)	Coordinate disaster response actions						
	TR: Local OPLAN directive						
11k(2)	Coordinate movement of and emergency procedures for						
11k(2a)	Stage IV						
	TR: Local OPLAN directive						
11k(2b)	PSRE						
	TR: Local OPLAN directive						
11k(2c)	Reentry Systems						
	TR: Local OPLAN directive; AFSPCI 31-1101						
11k(2d)	Missile						
	TR: Local OPLAN directive						

11k(3)	Perform actions in support of Missile Potential Hazard (MPH) conditions						
	TR: AFSPCI 21-0114						
11l	Coordinate with BCE on RPIE maintenance requirements and interruptions of normal commercial power						
	TR: AFSPCI 21-0114						
11m	Coordinate and document airborne launch and control systems tests						
	TR: ALCC Log; TOs 21M-LGM30X-2-1-X, 21-LG118A-2-1						
11n	Coordinate and document code change action						
	TR: AFSPCI 91-1005; TOs 21M-LGM30G-2-1-X, 21-LG118A-2-1						
11o	Perform actions required of severe weather, snow, ice, and flood control plans						
	TR: Local OPLAN directives						
11p	Perform support battle staff maintenance duties						
	TR: Local OPLAN directives						
11q	Report wing status						
	TR: AFSPCI 21-0103; TO 33D9-61-76-1; MCR 55-8						
11r	Use STU III						
	TR: Operating Manual						
12	***PLANS AND SCHEDULING***						
	TR: AFSPCI 21-0114						
12a	Planning						
12a(1)	Plan, coordinate, and compile maintenance forecasts						
12a(2)	Plan and coordinate						
12a(2a)	SELM/SELP						
12a(2b)	Code change						
12a(2c)	TCTO/MCL modification program						
12a(2d)	EWO generation meeting						
12a(2e)	Periodic maintenance program						
12a(2f)	RIVET Mile programs						
12a(2g)	Perform AVDO Functions						
12b	Scheduling						
12b(1)	Plan and schedule the use and maintenance of vehicles and equipment						
12b(2)	Coordinate jobs in conjunction with Job Control using appropriate work center requirements						

12b(3)	Develop daily work packages						
12b(4)	Conduct daily scheduling meetings						
13	***BRIEFING/DEBRIEFING***						
	TR: AFSPCI 21-0114						
13a	Brief work packages, site discrepancies, current road and weather conditions, and related information to						
13a(1)	On base shop personnel						
13a(2)	Dispatching personnel/teams						
13b	Debrief work packages, site discrepancies, and related information from						
13b(1)	On base shop personnel						
13b(2)	Dispatching personnel/teams						
13c	Assign, verify, and change maintenance priorities using the maintenance priority system						
13d	Forward LF site inspections and inventory forms to the proper agencies for review						
13e	Maintain currency of record copy of Site Workload Requirements/ Equipment Workload Requirements (SWR/EWR)						
13f	Perform SWR/EWR reconciliations with applicable agencies						
14	***TECHNICAL ENGINEERING***						
14a	Use technical data, special drawings, engineering data, and other data as applicable						
	TR: Special contractor data; depot instructions; CE technical data; "as built" drawings; engineering data; Inertial Performance Data (IPD); Launch Facility Activity Data (LFAD)						
14b	Conduct engineering studies						
	TR: AFSPCI 21-0114; Applicable technical data						
14c	Evaluate applicable Engineering Change Proposals (ECPs) and Facility Change Proposals (FCPs)						
	TR: AFSPCI 21-0114; Applicable technical data						
14d	Perform technical assistance and/or analysis for system effectiveness						
	TR: Applicable technical data						
14e	Perform technical engineering EWO planning duties						
	TR: Local directives						
14f	Perform Disaster Control Group Team duties						
	TR: Local O-Plan directives						
14g	System anomalies						
	TR: Applicable technical data						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

14g(1)	Troubleshoot						
14g(2)	Use special engineering test equipment						
14g(3)	Document faults and dispatches						
15	**TO LIBRARY**						
	TR: RM 1103; TOs 00-5-1, 00-5-2-2, 00-5-2-102, 00-5-17						
15a	Maintain and generate products from ATOMS data base						
15b	Process and control technical order, CEM , and CPIN distribution						
15c	Maintain initial distribution requirements						
15d	Perform routine, annual, and other required checks						
15e	Post TO						
15e(1)	Revisions						
15e(2)	Changes						
15e(3)	Supplements						
15e(3a)	Safety						
15e(3b)	Operational						
15e(3c)	Routine						
15e(3d)	TOPS						
15e(3e)	ITPS						
15e(3f)	TOFCN/VB pages						
15f	Post CEM						
15f(1)	Revisions						
15f(2)	Changes						
15f(3)	CEMICs						
15g	A-Page TO, CEM						
15h	Maintain task documents						
15h(1)	Revision and supplements						
15h(2)	RM 150 Change requests						
15h(3)	RM 150 logs						
15i	Maintain other support documents						
15i(1)	CPIN						
15i(2)	Task requirement documents						
15i(3)	Task flow documents						
15j	Issue/sign-in TO, CEM, and dispatch kits						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

16	***MAINTENANCE PROGRAMS***						
	TR: AFIs 38-101, 38-201; AFSPCI 21-0114						
16a	Manpower						
16a(1)	Monitor adequacy of assigned and authorized positions						
16a(2)	Advise maintenance managers of overall manpower positions						
16a(3)	Initiate manpower change requests						
16b	Mission Support Equipment (MSE)						
	TR: AFMAN 67-1						
16b(1)	Monitor authorized and assigned MSE						
16b(2)	Ensure MSE is requisitioned by the appropriate custodian						
16b(3)	MSE allowance authorization change request						
16b(3a)	Review, evaluate, and coordinate						
16b(3b)	Approve/Disapprove						
16b(4)	Complete allowance document files						
16b(5)	Plan and accomplish acquisition/deletion of MSE for system modifications						
16b(6)	Assist equipment custodians						
16b(7)	Monitor Maintenance Complex CA/CRLs						
16c	Facility management						
16c(1)	Manage facility program						
16c(2)	Monitor and act upon requests for new/additional facilities or alterations of existing facilities						
16c(3)	Coordinate with work centers						
16d	Resource management						
16d(1)	Monitor and control expenditure of funds						
16d(2)	Plan and budget for financial requirements						
16d(3)	Add financial requirements to long range plans						
16e	OPLAN monitor						
16e(1)	Develop, coordinate, and distribute OPLANs within the maintenance complex						
16e(2)	Coordinate and review						
16e(2a)	OPLANs from outside agencies						
16e(2b)	Feasibility studies						
16e(2c)	Host-tenant and Interservice Support Agreements						
16f	Review/Update/Maintain LG Battle Staff checklists						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

17	***ICBM CODES VAULT***						
17a	Lock/Alarm class A vault door						
	TR: AFI 31-209; TO 00-20F-2; SD 501-12, AFSPCI 91-1005						
17b	Maintain security of division containers, locks/combinations						
	TR: AFPD 31-1, 31-4; AFI 31-401						
17c	Maintain visitor control						
	TR: SD 501-12, AFSPCI 91-1005						
17d	Maintain code controller operations records						
	TR: SD 501-12, AFSPCI 91-1005						
17e	Comply with system control/requirements for						
	TR: SD 501-12, AFSPCI 91-1005						
17e(1)	WCPS						
17e(2)	20 year spares						
17e(3)	HCVE						
17e(4)	Master tapes/cartridges/discs						
17e(5)	LCP/keys						
17e(6)	LECG/EP (LG118A)						
17e(7)	LEP						
17e(8)	CCV/CSD(M)						
17e(9)	CCV/SCD (LG118A)						
17e(10)	P Plug						
17e(11)	KVP (LG118A)						
17e(12)	LFLC						
17e(13)	MCLC/LCLC/KCLC (LG118A)						
17e(14)	LFOC						
17e(15)	WSC/MCG Pen C/D Tapes (LG118A)						
17e(16)	Status Authentication System components						
17e(17)	Program tapes/cartridges/discs						
17e(18)	Target materials and execution plans						
	TR: AFI 10-1102						
17e(19)	WSC (LG118A)						
17e(20)	MCG (LG118A)						
17e(21)	LVP/COOP panel/keys (LG118A)						

17e(22)	TDIs						
17e(23)	CSD(G)						
17e(24)	IMU tapes						
17e(25)	GRP MGS Parameters data						
17e(26)	MGCS parameter tapes (LG118A)						
17e(27)	CTU (C631A)						
17e(28)	LCSC (LG118A)						
17e(29)	LCMU (LG118A)						
17e(30)	Tape transport (C-164A)						
17e(31)	MCU						
17e(32)	MGS computer						
17e(33)	MGC Computer (GRP)						
17e(34)	MGCS computer (LG118A)						
17e(35)	WCPS computer						
17e(36)	Sumcheck controls						
17e(37)	Off base training LF						
17e(38)	Test components						
17e(39)	Code change procedures						
17e(40)	SELM						
17e(41)	SELP (LG118A)						
17e(42)	Encryption PROMS						
17e(43)	Failed "Red Sensitive" WCPS console spares						
17e(44)	WCPS APM (KIV-42) (LG118A)						
17e(45)	LF APMs (KIV-42) (LG118A)						
17f	Documentation						
	TR: AFI 33-322, 37-138, SD 501-12, AFSPCI 91-1005						
17f(1)	Establish and maintain files						
17f(2)	File and locate records						
17f(3)	Classify and control records						
17f(4)	Maintain component control records						
17f(5)	Maintain WCPS operation records						
17f(6)	Maintain receipt/disposition records						
17g	Follow emergency procedures for						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

17g(1)	Possible Code Compromise (PCC)						
	TR: SDs 501-11, 501-12, AFSPCI 91-1005						
17g(2)	Two-person concept violations						
	TR: AFI 91-101, 91-104						
17g(3)	Single flight/ECC						
	TR: AFI 91-114; SD 501-11						
17g(4)	Lateral coding						
	TR: SD 501-11						
17g(5)	Emergency evacuation/destruction						
	TR: SD 501-11						
17g(6)	Violations of code handling procedures						
	TR: SDs 501-11, 501-12, AFSPCI 91-1005						
17g(7)	Possible compromise to Tamper Detection Indicator (TDI) technology						
	TR: SDs 501-11, 501-12, AFSPCI 91-1005						
17h	Code components, programs, and misc. materials						
	TR: SD 501-12, AFSPCI 91-1005						
17h(1)	Receipt for materials						
17h(2)	Store materials						
17h(3)	Inventory materials						
17h(4)	Dispose of materials						
17h(5)	Transfer materials						
17h(6)	Select and assign materials for						
17h(6a)	WCPS use only						
17h(6b)	Squadron use						
17h(6c)	LCC use						
17h(6d)	LF use						
17h(7)	Monitor availability of materials						
17h(8)	Identify, classify, and mark materials						
	TR: AFI 31-401						
17i	Field requirements						
	TR: SD 501-12, AFSPCI 91-1005						
17i(1)	Operational/test code configuration						
17i(1a)	Monitor code requirements/status						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

17i(1b)	Coordinate job requirements						
17i(1c)	Maintain work status boards						
17i(2)	Team dispatch/recovery						
	TR: SD 501-12, AFSPCI 91-1005						
17i(2a)	Prepare materials/equipment for issue						
17i(2b)	Identify and brief team						
17i(2c)	Apply issue restrictions						
17i(2d)	Recover materials						
17i(3)	Status of Field Teams						
17i(3a)	Monitor transport of material						
17i(3b)	Monitor transfer of material						
17i(3c)	Monitor field storage of material						
17i(3d)	Monitor installation of materials						
17i(3e)	Validate CMSC from LF						
17i(3f)	Validate VN from LF						
17i(3g)	Validate WSC/MCG CMCC from LCC						
17i(3h)	Install/inspect/remove TDIs						
17j	Equipment configuration						
	TR: TO 31X8-2-2-1						
17j(1)	Load/unload MTC						
17j(2)	Load/unload punched mylar tape						
17j(3)	Install/remove LECG test adapter						
17j(4)	Install/remove LECG/EP						
17j(5)	Install/remove LEP						
17j(6)	Install/remove MCU and reset tamper mechanism						
17j(7)	Install/remove MCU (MCU encoder)						
17j(8)	Install/remove C-164A tape transport						
17j(9)	Install/remove WSC test adapter						
17j(10)	Install/remove WSC processor drawer (LG118A)						
17j(11)	Install/remove WSC memory drawer (LG118A)						
17j(12)	Install/remove MCG test adapter						
17j(13)	Install/remove MCG controller-synchronizer (LG118A)						
17j(14)	Install/remove MCG drum (LG118A)						

17j(15)	Degauss MTC/7-track/9-track magnetic tape						
	TR: TO 33D9-104-31-2						
17j(16)	Install/remove CSD(G) test adapter						
17j(17)	Install/remove CSD(G) (Code verifier)						
17j(18)	Apply 7/9-track magnetic tape BOT/EOT markers						
17j(19)	Load/place on-line /unload 7/9-track magnetic tape						
17j(20)	Install/remove LCP verifier/test adapter						
17j(21)	Install/remove P Plug test adapter						
	TR: TO 31X8-2-2-2						
17j(22)	Install/remove KVP test adapter (LG118A)						
	TR: TO 31X8-2-2-2						
17j(23)	Install/remove removable disc						
17j(24)	Load KG84A						
17j(25)	Load/adjust/unload printer paper						
17j(26)	Load/remove printer ribbon cartridge						
17k	Equipment checkout						
	TR: TO 31X8-2-2-1						
17k(1)	Clean CTU read/write head						
17k(2)	Inspect MTC						
17k(3)	Condition MTC						
17k(4)	Inspect/clean read head and lamp aperture						
17k(5)	Clean MTU tape deck						
17k(6)	Comply with electrostatic discharge requirements						
	TR: TO 00-25-234						
17k(7)	Perform CCV self test						
17k(8)	Perform MCU functional test						
	TR: TO 31X8-2-2-1						
17l	Shielded enclosure						
	TR: TO 31X8-2-2-1						
17l(1)	Perform SE visual inspection						
17l(2)	Perform SE fire alarm test						
17l(3)	Perform SE environmental test						
17l(4)	Perform SE air pressure and door seal test						

17l(5)	Perform SE communications test						
17m	WCPS power						
	TR: TO 31X8-2-2-1						
17m(1)	Start-up WCPS - normal start procedure						
17m(2)	Start-up WCPS - cold start procedure						
17n	CCOS executive functions						
	TR: TO 31X8-2-2-1, 31X8-2-2-2						
17n(1)	Perform						
17n(1a)	Computer subsystem test						
17n(1b)	CRT/keyboard terminal test						
17n(1c)	Power supplies/ADC test						
17n(1d)	Disc assembly test						
17n(1e)	Line printer test						
17n(1f)	Tape transport test						
17n(1g)	Cartridge drive unit test						
17n(1h)	9-track MTU test						
17n(1i)	KVP interface test (LG118A)						
17n(1j)	7-track MTU test						
17n(1k)	Isolation circuit test						
17n(1l)	Digital clock test						
17n(1m)	KG84A/modem comm link test						
17n(1n)	P-Plug adapter test						
17n(1o)	MCU encoder test						
17n(1p)	Force mod/Peacekeeper LCP test						
17n(1q)	Wing IX LCP test						
17n(1r)	LECG interface test						
17n(1s)	CSD(G) interface test						
17n(1t)	KIV-42 interface test (LG118A)						
17n(1u)	KI-22 interface test						
17n(1v)	MCG interface test						
17n(1w)	CCV interface test						
17n(1x)	MSD/L interface test (LG118A)						
17n(1y)	WSC interface test						

17n(1z)	REACT BS/L test						
17n(1aa)	REACT FDD test						
17n(1ab)	Self test						
17n(1ac)	End item load						
17n(2)	Display equipment status						
17n(3)	Display/reset log file						
17n(4)	Pack system disc						
17n(5)	Prepare new disc						
17n(6)	Display disc ID						
17n(7)	Transmit data via link						
17n(8)	Receive data via link						
17n(9)	Edit link control files						
17n(10)	Perform manual recordkeeping						
17n(11)	Relog (change operator)						
17n(12)	Prepare PVS backup tape						
17n(13)	Verify DC300 program copies						
17n(14)	Verify 9-track program copies						
17n(15)	Select commanded overwrite						
17n(16)	Perform media to media conversion						
17n(17)	Log off (exit) systems						
17n(18)	Inhibit operator input print						
17n(19)	Enable operator input print						
17n(20)	Perform console shutdown						
17n(21)	Change KI-22 keying variable						
17n(22)	Initialize REACT BS/L HDA						
17n(23)	Verify reel to reel tape copies						
17n(24)	Enable telephone						
17n(25)	Convert 9-track to 7-track tapes						
17n(26)	Backup system disk						
17n(27)	Format disc in data drive						
17o	Display main menu (WMAP/WPAP)						
	TR: TO 31X8-2-2-1						
17p	Accomplish master data control (WMAP/WPAP)						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

	TR: TO 31X8-2-2-1						
17p(1)	Load A/B cartridge						
17p(2)	Change ITSC pen data						
17p(3)	Load pen data						
17p(4)	Load wing code disc						
17p(5)	Perform KI-22 key change						
17p(6)	Assign pen data to LCF						
17p(7)	Assign pen data to LF						
17p(8)	Display master data						
17p(9)	Load/delete P-Plug						
17p(10)	Rekey KIV-42 (LG118A)						
17p(11)	Assign L prime data (LG118A)						
17p(12)	Load L prime data (LG118A)						
17p(13)	Load F data (LG118A)						
17p(14)	Load/delete KVP (LG118A)						
17p(15)	Load/replenish I code data (REACT)						
17p(16)	Load GRP I code data						
17p(17)	Prepare end item tapes						
17q	Establish support data						
	TR: TO 31X8-2-2-1						
17q(1)	Load MM III WS133AM OGP						
17q(2)	Load MM III WS133B OGP						
17q(3)	Load MM III OFP						
17q(4)	Load MM III overwrite						
17q(5)	Load execution plan						
17q(6)	Load flight constants						
17q(7)	Load OEP						
17q(8)	Load IMU tape						
17q(9)	Load LF offload tapes						
17q(10)	Load GRP OGP/OFP data						
17q(11)	Load GRP MGS parameter data						
17q(12)	Load targeting tape						
17q(13)	Load LF master data						

17q(14)	Load MCG tapes (LG118A)						
17q(15)	Load PK OGP/OFP (LG118A)						
17q(16)	Load mission parameters (LG118A)						
17q(17)	Load MGCS parameters (LG118A)						
17q(18)	Load launch control program (LG118A)						
17q(19)	Load POEP tapes (LG118A)						
17r	Generate and verify data (WMAP/WPAP) for						
	TR: TO 31X8-2-2-1						
17r(1)	WSC Pen C/D tape (LG118A)						
17r(2)	MCG Pen C/D tape (LG118A)						
17r(3)	Fixed data cartridge						
17r(4)	LFLC variable data						
17r(5)	Complete load LFLC (GRP)						
17r(6)	Code change LFLC (GRP)						
17r(7)	Pen D LFLC (GRP)						
17r(8)	LFOC variable data						
17r(9)	Wing code disk						
17r(10)	MECA LFLC (LG118A)						
17r(11)	Keys/codes LFLC (LG118A)						
17r(12)	LCSC LFLC (LG118A)						
17s	Perform the sum checks (WMAP/WPAP)						
	TR: TO 31X8-2-2-1						
17s(1)	MM CMSC						
17s(2)	GRP CMSC						
17s(3)	WSC CMCC						
17s(4)	MCG CMCC						
17s(5)	LCSC CMSC (LG118A)						
17s(6)	MECA CMSC (LG118A)						
17s(7)	Keys/codes CMSC (LG118A)						
17t	Encode and verify devices (WMAP/WPAP)						
	TR: TO 31X8-2-2-1						
17t(1)	Encode and verify LECG (LG118A)						
17t(2)	Encode and verify LEP						

17t(3)	Encode and verify LCP						
17t(4)	Encode and verify CCV						
17t(5)	Perform CCV trace data functions						
17t(6)	Verify CSD(G)						
17t(7)	Encode MCU with shipping code						
17t(8)	Encode SCD (LG118A)						
17u	Data verification						
	TR: TO 31X8-2-2-1						
17u(1)	Perform selective enable verification						
17u(2)	Perform launch verification						
17v	Verify only data functions						
	TR: TO 31X8-2-2-1						
17v(1)	Verify WSC Pen C/D tapes (LG118A)						
17v(2)	Verify MCG Pen C/D tapes (LG118A)						
17v(3)	Verify fixed data cartridges						
17v(4)	Verify LFLC variable data						
17v(5)	Verify GRP complete load LFLC						
17v(6)	Verify GRP code change LFLC						
17v(7)	Verify GRP Pen D LFLC						
17v(8)	Verify LFOC variable data						
17v(9)	Verify wing code disk						
17v(10)	Verify LECG (LG118A)						
17v(11)	Verify LEP						
17v(12)	Verify MECA LFLC (LG118A)						
17v(13)	Verify keys/codes LFLC (LG118A)						
17v(14)	Verify LCSC LFLC (LG118A)						
17w	Display tape ID (WMAP/WPAP)						
	TR: TO 31X8-2-2-1						
17w(1)	Display wing code disk ID						
17w(2)	Display A/B cartridge ID						
17w(3)	Display WSC/MCG pen tape ID						
17w(4)	Display DC300 cartridge ID						
17w(5)	Display MECA LFLC ID (LG118A)						

17w(6)	Display keys/codes LFLC ID (LG118A)						
17w(7)	Display LCSC LFLC ID (LG118A)						
17x	Load and verify devices (REACT)						
	TR: TO 31X8-2-2-1						
17x(1)	Initialize LCF BS/L HDA						
17x(2)	Load/verify LCF BS/L HDA						
17x(3)	Perform LCF BS/L HDA backout CMSC						
17x(4)	Load/verify LCF diskettes						
17x(4a)	Code change diskette						
17x(4b)	EPP/MA database diskette						
17x(4c)	FDM format database diskette						
17x(4d)	TCI/EPCI diskette						
17y	Load WSC (WMAP/WPAP)						
	TR: TO 31X8-2-2-1						
17z	Load and initialize MCG (WMAP/WPAP)						
	TR: TO 31X8-2-2-1						
17aa	Respond to unsuccessful sumchecks						
	TR: TO 31X8-2-2-1						
17aa(1)	Perform MM CMSC backout procedures						
17aa(2)	Perform GRP CMSC backout procedures						
17aa(3)	Perform MM CMCC backout procedures						
17aa(4)	Perform PK CMCC backout procedures						
17aa(5)	Respond to unsuccessful VNs						
	TR: SD 501-12, AFSPCI 91-1005						
17ab	Equipment malfunctions						
	TR: TO 31X8-2-2-1, 31X8-2-2-2						
17ab(1)	Perform corrective actions						
17ab(2)	Restart 7/9-track after power failure						
17ab(3)	Perform WCPS emergency shutdown						
17ab(4)	Perform KG84A emergency operations						
17ab(5)	Perform SCD code erase procedure (LG118A)						
17ac	Administrative communications management						
	TR: AFI 10-1102, 31-401, 37-126, SD 501-12, AFSPCI 91-1005						

ATTACHMENT 1
AFSC 2M053/2M073 STS
COMMON 2M0XX MISSILE AND SPACE MAINTENANCE TASKS

17ac(1)	Process official incoming/outgoing communications						
17ac(2)	Process, protect, and destroy classified information						
17ac(3)	Apply classification markings						
17ac(4)	Handle/store/account for classified materials						
17ac(5)	Document/package/process package for courier/classified shipments						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

							CERTIFY
		CORE	START	COMP	TRAINEE	TRAINER	OFFICIAL
ITEM #	**TASK / KNOWLEDGE ITEM**	TASK	DATE	DATE	INITIALS	INITIALS	INITIALS
1	***TEST EQUIPMENT***						
	TR: AFPAM 91-35, TOs 33-1-19, 33A1-9-34-1, 33D7-22-34-1, 33D7-22-34-11, 33D9-17-70-1, 33D9-17-73-1, 33D9-17-81-2, 33D9-17-82-1, 33D9-84-26-1, 33D9-122-16-1, 35E9-37-2, Applicable Manufacturer's Operation and Service Instructions, Alnorist Co. Operating Instructions Number 2071						
1a	Use ECS test equipment	3					
1b	WS-133 guidance and control liquid cooling bench test and repair set						
	TR: TOs 21M-LGM30X-2-6, 33D9-17-89-1						
1b(1)	Checkout						
1b(2)	Troubleshoot						
1b(3)	Repair						
1b(4)	Calibrate						
1c	Use electronic/electrical circuit portable test equipment	3					
	TR: TO 33-1-21, 33A1-4-29-1, 33A1-4-35-1, 33A1-6-32-1, 33A1-6-63-1, 33A1-6-91-1, 33A1-12-2-1, 33A1-12-145-21, 33A1-12-185-11, 33A1-12-681-1, 33A1-12-687-1, 33A1-12-871-1, 33A1-12-933-1, 33A1-12-1006-1, 33A1-12-1059-1, 33A1-12-1092-1, 33A1-12-1124-1, 33A1-12-1147-1, 33A1-216-1, 33A1-12-1198-1, 33A1-12-1199-1, 33DA98-15-1, CEM 21M-SM80X-2-21-X						
1d	Guidance and control conditioning unit test bench						
	TR: TO 33D9-3-265-1						
1d(1)	Checkout						
1d(2)	Troubleshoot						
1d(3)	Repair						
1e	Guidance and control conditioning unit test set						
	TR: TO 33D9-3-264-1						
1e(1)	Checkout						
1e(2)	Troubleshoot						
1e(3)	Repair						
1f	Refrigerant reclaim system						
	TR: Applicable Manufacturer's Operational Instructions						
1f(1)	Operate	5					

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

							CERTIFY
		CORE	START	COMP	TRAINEE	TRAINER	OFFICIAL
ITEM #	**TASK / KNOWLEDGE ITEM**	TASK	DATE	DATE	INITIALS	INITIALS	INITIALS
1f(2)	Service						
1f(3)	Repair						
2	***MSB MAINTENANCE***						
2a	PMT van air compressor						
	TR: Applicable Manufacturer's Operational Instructions						
2a(1)	Inspect						
2a(2)	Repair						
2b	Support vans						
	TR: TO 21M-LGM30F-6, 36A12-24-3-1, 35D4-7-4-2, LJ20AF-95-001						
2b(1)	Electrical systems						
2b(1a)	Perform periodic inspection						
2b(1b)	Troubleshoot						
2b(1c)	Repair						
2b(2)	Hoist/crane						
2b(2a)	Perform periodic inspection						
2b(2b)	Troubleshoot						
2b(2c)	Repair						
2c	PMT van						
	TR: TOs 36A9-8-56-1, 21M-LGM30F-6, Applicable Manufacturer's Operating Instructions						
2c(1)	Hoist						
	TR: TO 36Y16-25-1						
2c(1a)	Perform periodic inspection						
2c(1b)	Troubleshoot						
2c(1c)	Repair						
2c(1d)	Operate						
2c(2)	APU/electrical system						
	TR: TO 35C2-3-498-1						
2c(2a)	Perform periodic inspection						
2c(2b)	Troubleshoot						
2c(2c)	Repair						
2c(2d)	Operate						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

							CERTIFY
		CORE	START	COMP	TRAINEE	TRAINER	OFFICIAL
ITEM #	**TASK / KNOWLEDGE ITEM**	TASK	DATE	DATE	INITIALS	INITIALS	INITIALS
2c(3)	ECS						
	TR: TO 35E9-272-1						
2c(3a)	Perform periodic inspection						
2c(3b)	Troubleshoot						
2c(3c)	Repair						
2c(3d)	Operate						
2d	Payload transporter						
	TR: TOs 21M-LGM30F-6, 21M-LGM30G-2-33, 31S9-4-83-1, 36A9-8-49-1, 36A9-8-58-1, 38G1-16-161, 38G1-16-162						
2d(1)	Security system						
2d(1a)	Perform periodic inspection						
2d(1b)	Troubleshoot						
2d(1c)	Repair						
2d(2)	Hoist						
2d(2a)	Perform periodic inspection						
2d(2b)	Troubleshoot						
2d(2c)	Repair						
2d(3)	APU/electrical system						
2d(3a)	Perform periodic inspection						
2d(3b)	Troubleshoot						
2d(3c)	Repair						
2d(4)	ECS						
2d(4a)	Perform periodic inspection						
2d(4b)	Troubleshoot						
2d(4c)	Repair						
2d(4d)	Interpret theory of operation, interworking relationships and analyze and repair anomalies for the Payload Transporter APU/electrical system, security system, hoist and ECS	7					
2e	Transporter erector						
	TR: TOs 35C2-3-493-1, 35D3-11-52-2, 35D3-11-52-4, 35E9-266-1, 21M-LGM30F-6						
2e(1)	Electrical system						
2e(1a)	Perform periodic inspection						
2e(1b)	Troubleshoot						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

							CERTIFY
		CORE	START	COMP	TRAINEE	TRAINER	OFFICIAL
ITEM #	**TASK / KNOWLEDGE ITEM**	TASK	DATE	DATE	INITIALS	INITIALS	INITIALS
2e(1c)	Repair						
2e(2)	ECS						
2e(2a)	Perform periodic inspection						
2e(2b)	Troubleshoot						
2e(2c)	Repair						
2e(3)	APU						
2e(3a)	Perform periodic inspection						
2e(3b)	Troubleshoot						
2e(3c)	Repair						
2e(4)	Repair handheld control unit						
2f	Portable air conditioner						
	TR: TOs 21M-LGM30F-6, 35C2-3-475-2, 35C2-3-479-4, 35C2-3-493-1, 35E9-25-3, 35E9-270-1						
2f(1)	APU/electrical system						
2f(1a)	Perform periodic inspection						
2f(1b)	Operate						
2f(1c)	Troubleshoot						
2f(1d)	Repair						
2f(2)	ECS						
2f(2a)	Perform periodic inspection						
2f(2b)	Troubleshoot						
2f(2c)	Repair						
2g	Hydraulic pipe pusher electrical system						
	TR: TO 35M27-3-8-1						
2g(1)	Troubleshoot						
2g(2)	Repair						
2h	Elevator work cage/Maintenance Platform, Guided Missile						
	TR: TOs 35A4-2-31-1, 35A4-4-9-1						
2h(1)	Checkout						
2h(2)	Troubleshoot						
2h(3)	Repair						
2h(4)	Operate to facilitate inspection/repair						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

							CERTIFY
		CORE	START	COMP	TRAINEE	TRAINER	OFFICIAL
ITEM #	**TASK / KNOWLEDGE ITEM**	TASK	DATE	DATE	INITIALS	INITIALS	INITIALS
2h(5)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
2i	Elevator work cage, power and communication distribution box						
	TR: TO 21M-LGM30X-2-11(-1), 35A4-2-31-1						
2i(1)	Troubleshoot						
2i(2)	Repair						
2j	Lead acid, chloride, MPP batteries						
	TR: TOs 35C2-2-101-X, 36A9-8-49-1-1, CEMs 21M-SM80X-2-21-X, 35R-1-X51-X						
2j(1)	Perform periodic inspection						
2j(2)	Charge/discharge						
2j(3)	Repair						
2k	Reconditioning of LF/MAF batteries						
	TR: TO 35M-1-101						
2k(1)	Charge						
2k(2)	Discharge						
2k(3)	Repair						
2k(4)	Inspect						
2l	Instrument air compressor						
	TR: TO 21M-LGM30X-2-7-X						
2l(1)	Checkout						
2l(2)	Troubleshoot						
2l(3)	Repair						
2m	Sump pumps						
	TR: CEMs 21-SM80X-2-24-X, 21SM80X-2-26-X, 35R-1-X61-X, 35R-1-X81-X						
2m(1)	Troubleshoot						
2m(2)	Repair						
2n	PLTF grounding and lightning protection system						
	TR: TO 33A1-12-687-1, CEMs 21-SM80-6 (Vol XX), 21-SM80X-2-26-X						
2n(1)	Perform periodic inspection						
2n(2)	Repair miscellaneous hardware						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

2o	Prepare brine solution/antifreeze premix						
	TR: TO 21M-LGM30X-2-7-X, CEM 21-SM80X-2-21-X						
2p	Brine chiller test stand						
	TR: TOs 21M-LGM30X-2-7-X, 33D9-61-84-1						
2p(1)	Checkout						
2p(2)	Operate						
2p(3)	Troubleshoot						
2p(4)	Repair						
2q	LF brine chiller						
	TR: TO 21M-LGM30X-2-7-X						
2q(1)	Checkout						
2q(2)	Troubleshoot						
2q(3)	Repair						
2r	MAF brine chiller						
	TR: TO 21M-LGM30X-2-7-X						
2r(1)	Checkout						
2r(2)	Troubleshoot						
2r(3)	Repair						
2s	LF brine pump						
	TR: TO 21M-LGM30X-2-7-X						
2s(1)	Checkout						
2s(2)	Repair						
2t	MAF brine pump						
	TR: TO 21M-LGM30X-2-7-X						
2t(1)	Checkout						
2t(2)	Repair						
2u	Operate cable vulcanizer						
	TR: TO 34Y9-3-9-1						
2v	Use maintenance stands						
	TR: TOs 35A4-2-5-1, 35A4-2-6-1						
2w	Elevator work platform electrical system						
	TR: TOs 35D36-1-102, 36C3-5-15-1						
2w(1)	Perform periodic inspection						
2w(2)	Troubleshoot						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

2w(3)	Repair						
2x	Wing Code Processing System (WCPS) uninterrupted power supply						
	TR: TOs 21-LG118A-2-16, 21M-LGM30G-2-16, 21M-LGM30F-6, 31X8-2-2-2						
2x(1)	Perform periodic inspection						
2x(2)	Troubleshoot						
2x(3)	Charge						
2x(4)	Replace						
2y	Environmental compliance						
	TR: Applicable Manufacturer's Operational Instructions						
2y(1)	Reclaim ethylene glycol						
2y(2)	Operate oil filter crusher						
3	***SMSB MAINTENANCE OF GUIDANCE AND CONTROL COOLING SYSTEM***						
	TR: TOs 21M-LGM30X-2-6, 33D9-17-32-1, 33D9-17-81-2, 35E9-35-22						
3a	400 Hz chiller unit						
3a(1)	Checkout						
3a(2)	Troubleshoot						
3a(3)	Repair						
3b	Control valve assembly						
3b(1)	Checkout						
3b(2)	Repair						
3c	400 Hz liquid cooling pump						
3c(1)	Checkout						
3c(2)	Troubleshoot						
3c(3)	Repair						
3d	Liquid cooler filter/assembly						
3d(1)	Checkout						
3d(2)	Clean						
3d(3)	Repair						
3e	Guidance section liquid cooler test set						
3e(1)	Checkout/calibrate						
3e(2)	Troubleshoot						
3e(3)	Repair						
3f	Prepare chromate dioxin solution						
4	***LGM 30 LAUNCH FACILITY PROCEDURES***						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

	TR: TOs 21M-LGM30X-2-10 (-1), 21M-LGM30X-2-11(-1), 21M-LGM30X-2-19, 21M-LGM30F-2-17-9, 35A4-4-9-1						
4a	Enter LER	5					
4b	Enter LSB/LEB	5					
4c	Perform emergency shutdown	5					
4d	Evacuate launch facility for EWO launch conditions	5					
4e	Perform emergency electrical isolation of LSB/LEB	5					
4f	Lower/raise equipment	5					
4g	Exit LER	5					
4h	Exit LSB/LEB	5					
4i	Enter launch tube						
4j	Exit launch tube						
4k	Perform partial LF power removal/shutdown						
4l	Perform hostile LF securing	5					
4m	Perform LF exit procedures	5					
4n	Install/remove LER platform set						
4o	Elevator work cage/Maintenance Platform, Guided Missile						
4o(1)	Operate						
4o(2)	Install/remove						
4p	Operate maintenance vehicle hoist						
5	***LG 118 LAUNCH FACILITY PROCEDURES***						
	TR: TOs 21-LG118A-2-10, 21-LG118A-2-11, 21-LG118A-2-19, 21-LG118A-2-17-2						
5a	Enter LER	5					
5b	Enter LSB/LEB	5					
5c	Perform emergency shutdown	5					
5d	Evacuate launch facility for EWO launch conditions	5					
5e	Perform emergency electrical isolation of LSB/LEB	5					
5f	Lower/raise equipment	5					
5g	Exit LER	5					
5h	Exit LSB/LEB	5					
5i	Enter launch tube						
5j	Exit launch tube						
5k	Perform LF exit procedures	5					
5l	Elevator work cage/Maintenance Platform, Guided Missile						
5l(1)	Operate						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

5l(2)	Install/remove						
5m	Operate maintenance vehicle hoist						
5n	Perform partial LF power removal/shutdown						
6	***LAUNCH FACILITY MAINTENANCE (WS133AM/CDB, WS133B/CDB, WS118A)***						
6a	Power Generation System						
	TR: AFI 32-5012, CEMs 21-SM80X-2-21-X, 21-SM80X-2-21-X-1, 21-SM80-6 (Vol XX), 35R-1-X51-X, 35R1-X81-X, AFSPCI 32-1009, Bill Talbot: Diesel Fundamentals, Service and Repair; Goodheart-Wilcox Company Inc., Althouse, Turnquist and Bracciano: Modern Refrigeration and Air Conditioning, Goodheart-Wilcox Company Inc.; System Schematic Diagrams						
6a(1)	Operate Diesel Electric Unit (DEU) (See Note 1)	3					
6a(2)	Replace DEU						
6a(3)	Engine fuel oil system						
6a(3a)	Perform biennial periodic inspection						
6a(3b)	Perform quadrennial periodic inspection	5					
6a(3c)	Service						
6a(3d)	Troubleshoot	5					
6a(3e)	Repair						
6a(3f)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6a(4)	Engine lube oil system						
6a(4a)	Perform biennial periodic inspection	5					
6a(4b)	Perform quadrennial periodic inspection	5					
6a(4c)	Troubleshoot	5					
6a(4d)	Repair						
6a(4e)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6a(5)	Engine cooling system						
6a(5a)	Perform biennial periodic inspection	3					
6a(5b)	Perform quadrennial periodic inspection	5					
6a(5c)	Troubleshoot	5					
6a(5d)	Repair						
6a(5e)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6a(6)	Engine governor/injection pump/injectors						
6a(6a)	Perform biennial periodic inspection						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

6a(6b)	Perform quadrennial periodic inspection	5					
6a(6c)	Troubleshoot						
6a(6d)	Repair						
6a(6e)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6a(7)	Generator/exciter/voltage regulator						
6a(7a)	Perform biennial periodic inspection	5					
6a(7b)	Troubleshoot						
6a(7c)	Repair						
6a(7d)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6a(8)	Engine starting/stopping devices						
6a(8a)	Troubleshoot						
6a(8b)	Repair						
6a(9)	Diesel battery charger						
6a(9a)	Perform biennial periodic inspection	3					
6a(9b)	Troubleshoot						
6a(9c)	Repair						
6a(10)	Starting batteries						
6a(10a)	Annual periodic inspection						
6a(10b)	Perform biennial periodic inspection	3					
6a(10c)	Troubleshoot						
6a(10d)	Repair						
6a(11)	Engine cranking/alarm panel						
6a(11a)	Perform biennial periodic inspection	5					
6a(11b)	Troubleshoot						
6a(11c)	Repair						
6a(12)	Engine/generator control panel						
6a(12a)	Perform biennial periodic inspection	5					
6a(12b)	Troubleshoot						
6a(12c)	Repair						
6a(12d)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6a(13)	Engine safety/alarm devices	5					
6a(13a)	Perform biennial periodic inspection	5					
6a(13b)	Perform quadrennial periodic inspection	5					

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

6a(13c)	Troubleshoot						
6a(13d)	Repair						
6a(13e)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6a(14)	Engine intake/exhaust system						
6a(14a)	Perform biennial periodic inspection	5					
6a(14b)	Perform quadrennial periodic inspection	5					
6a(14c)	Troubleshoot						
6a(14d)	Repair						
6a(14e)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6a(15)	Immersion heater						
6a(15a)	Troubleshoot	5					
6a(15b)	Repair						
6a(16)	Automatic switching unit/power control center						
6a(16a)	Perform biennial periodic inspection	5					
6a(16b)	Perform quadrennial periodic inspection (VAFB only)						
6a(16c)	Troubleshoot						
6a(16d)	Repair						
6a(16e)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6a(17)	Automatic transfer switches/switch gear						
6a(17a)	Perform biennial periodic inspection	5					
6a(17b)	Troubleshoot						
6a(17c)	Repair						
6a(17d)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6a(18)	Replace Minuteman power processor	5					
6a(19)	Minuteman power processor battery/charger						
6a(19a)	Perform biennial periodic inspection	3					
6a(19b)	Troubleshoot						
6a(19c)	Repair						
6a(20)	Diesel vibration dampers/snubbers						
6a(20a)	Perform periodic inspection						
6a(20b)	Repair						
6b	Environmental Control System (ECS)						
	TR: TOs 21M-LGM30F-6, 21M-LGM30X-2-7-X, 21-LG118A-2-7						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

6b(1)	Brine subsystem						
6b(1a)	Perform biennial periodic inspection	5					
6b(1b)	Troubleshoot	5					
6b(1c)	Repair						
6b(1d)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6b(1e)	Service hydraulic accumulators						
6b(2)	Refrigerant subsystem						
6b(2a)	Perform biennial periodic inspection	5					
6b(2b)	Troubleshoot	5					
6b(2c)	Repair						
6b(2d)	Perform advanced troubleshooting	7					
6b(3)	Brine chiller control panel						
6b(3a)	Perform biennial periodic inspection	3					
6b(3b)	Troubleshoot						
6b(3c)	Repair						
6b(3d)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6b(4)	Replace brine chiller unit						
6b(5)	Air conditioning subsystem/controls/alarms						
6b(5a)	Perform biennial periodic inspection	3					
6b(5b)	Troubleshoot						
6b(5c)	Repair						
6b(5d)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6b(5e)	Balance air flow	5					
6b(6)	Launch tube heating subsystem/controls/alarms						
6b(6a)	Perform annual periodic inspection						
6b(6b)	Perform biennial periodic inspection	5					
6b(6c)	Troubleshoot						
6b(6d)	Repair						
6b(6e)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6b(7)	Emergency air conditioning subsystem/controls/alarms						
6b(7a)	Perform biennial periodic inspection	5					
6b(7b)	Troubleshoot						
6b(7c)	Repair						

6b(7d)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6b(8)	Heating and ventilation/circulating air subsystem/controls/alarms						
	TR: TO 21M-LGM30X-2-7-X, CEMs 21-SM80X-2-20-X, 21-SM80-6 (Vol X), 35R-1-X41-X						
6b(8a)	Perform annual periodic inspection						
6b(8b)	Perform biennial periodic inspection	5					
6b(8c)	Troubleshoot	5					
6b(8d)	Repair						
6b(8e)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6b(8f)	Balance LEB air flow						
6b(9)	Instrument air subsystem						
6b(9a)	Perform biennial periodic inspection	3					
6b(9b)	Troubleshoot						
6b(9c)	Repair						
6b(9d)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
6b(10)	Make-up air subsystem/controls/alarms						
6b(10a)	Perform biennial periodic inspection	3					
6b(10b)	Troubleshoot						
6b(10c)	Repair						
6c	Guidance and control system:						
	TR: TOs 21M-LGM30F-6, 21M-LGM30X-2-6						
6c(1)	Perform biennial periodic inspection						
6c(2)	Service missile guidance set cooling system						
6d	Electrical power distribution system						
	TR: TO 21M-LGM30F-6, CEM 21-SM80-6 (Vol XX)						
6d(1)	Perform annual inspection of emergency storage battery set	3					
	TR: TOs 21M-LGM30X-2-11, 21M-LGM30X-2-21-X						
6d(2)	Electrical power filters						
	TR: TOs 21M-LGM30F-6, 21M-LGM30X-2-11, 21M-LGM30X-2-21-X, CEMs 21-SM80X-2-21-X, 21-SM80-6 (Vol XX), 35R-1-X51-X						
6d(2a)	Perform annual periodic inspection (VAFB only)						
6d(2b)	Perform biennial periodic inspection						
6d(2c)	Perform quadrennial periodic inspection						
6d(2d)	Troubleshoot						

6d(2e)	Repair						
6d(3)	Grounding/lightning protection system						
	TR: TOs 33A1-11-687-1, 33A1-12-310-1, CEMs 21-SM80-6 (Vol XX), 21-SM80X-2-21-X,35R-1-X51-X						
6d(3a)	Perform annual periodic inspection (VAFB only)						
6d(3b)	Perform biennial periodic inspection	5					
6d(3c)	Perform triennial periodic inspection (VAFB only)						
6d(3d)	Repair miscellaneous hardware						
6d(4)	Distribution panels/main junction boxes						
	TR: TO 21M-LGM30X-2-11-X, CEMs 21-SM80-6 (Vol XX), 21-SM80X-2-21-X, 35R-1-X51-X, National Electric Code; National Fire Protection Association						
6d(4a)	Perform annual periodic inspection (VAFB only)						
6d(4b)	Perform biennial periodic inspection	5					
6d(4c)	Troubleshoot						
6d(4d)	Repair						
6d(5)	Electrical wiring						
	TR: CEMs 21-SM80X-2-21-X, 35R-1-X51-X						
6d(5a)	Troubleshoot						
6d(5b)	Repair						
6d(5c)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
	TR: National Electric Code; National Fire Protection Association, System Schematic Diagrams						
6d(6)	Elevator work cage power and communications distribution						
	TR: TO 21M-LGM30X-2-11(-1)						
6d(6a)	Troubleshoot						
6d(6b)	Repair						
6d(6c)	Remove						
6d(6d)	Replace						
6d(7)	Perform periodic inspection of motor generator set						
	TR: TOs 21M-LGM30F-6, 21M-LGM30X-2-11(-1)						
6e	Waste disposal system						
	TR: CEMs 21SM80X-2-24-X, 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X61-X, 35R-1-X81-1						
6e(1)	Sump pump 103/501						
6e(1a)	Perform biennial periodic inspection	5					

6e(1b)	Troubleshoot						
6e(1c)	Repair						
6e(1d)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
	TR: National Electric Code, National Fire Protection Association, System Schematic Diagrams						
6e(2)	Dewatering pumps						
6e(2a)	Perform biennial periodic inspection						
6e(2b)	Troubleshoot						
6e(2c)	Repair						
6e(3)	Sump pump 102/601						
6e(3a)	Perform biennial periodic inspection	5					
6e(3b)	Perform special periodic inspection	5					
6e(3c)	Troubleshoot	5					
6e(3d)	Repair						
6e(3e)	Interpret theory of operation, interworking relationships, and analyze and repair anomalies	7					
	TR: National Electric Code, National Fire Protection Association, System Schematic Diagrams						
6e(4)	Heat tape						
6e(4a)	Perform biennial periodic inspection						
6e(4b)	Troubleshoot						
6e(4c)	Repair						
6f	Personnel access/security system						
	TR: TOs 21M-LGM30F-2-19, 21M-LGM30F-6, 21M-LGM30G-2-28-1, 21M-LGM30G-2-10 (-1), 35M1-9-2-2						
6f(1)	Perform annual periodic inspection						
6f(2)	Perform biennial periodic inspection						
6f(3)	Perform quadrennial periodic inspection	5					
6f(4)	Perform security pit electrical test	5					
6f(5)	Change secondary door lock combination						
6f(6)	PAH hand driven linear actuator						
6f(6a)	Perform biennial periodic inspection	5					
6f(6b)	Perform quadrennial periodic inspection	5					
6f(6c)	Replace	5					
6f(7)	LEB blast door						
6f(7a)	Perform annual periodic inspection						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

6f(7b)	Perform biennial periodic inspection						
6f(7c)	Repair minor mechanical components						
6g	Shock attenuation system						
	TR: TO 21M-LGM30F-6, 21M-LGM30X-2-11-X, 21M-LGM30G-2-28-X, CEM 21M-SM80X-2-26-X, 35R-1-X81-X						
6g(1)	Perform periodic inspection						
6g(2)	Troubleshoot						
6g(3)	Repair						
6h	Perform annual periodic inspection of gas mask						
	TR: TO 14P4-9-31, 21M-LGM30F-6, 14P4-1-151						
6i	Perform biennial periodic inspection of launch tube access system	5					
	TR: CEMs 21-SM80-6 (Vol XX), 21-SM80X-2-26-X, 35R-1-X81-X						
7	***LG 118 LAUNCH FACILITY MAINTENANCE***						
7a	ECS						
	TR: TOs 21-LG118A-2-7, 21-LG118A-6						
7a(1)	Air conditioning subsystem/controls/alarms						
7a(1a)	Perform biennial periodic inspection						
7a(1b)	Troubleshoot						
7a(1c)	Repair						
7a(2)	Launch tube heating subsystem/controls/alarms						
7a(2a)	Perform biennial periodic inspection						
7a(2b)	Troubleshoot						
7a(2c)	Repair						
7a(3)	Emergency air conditioning subsystem/controls/alarms						
7a(3a)	Perform biennial periodic inspection						
7a(3b)	Troubleshoot						
7a(3c)	Repair						
7a(4)	Purge air subsystem						
7a(4a)	Perform biennial periodic inspection						
7a(4b)	Troubleshoot						
7a(4c)	Repair						
7b	Guidance and control conditioning unit						
	TR: TO 21-LG118A-2-6, 21-LG118A-6						
7b(1)	Perform annual periodic inspection						
7b(2)	Perform biennial periodic inspection						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

7b(3)	Troubleshoot						
7b(4)	Repair						
7b(5)	Service						
7b(6)	Replace filter drier						
7b(7)	Replace condenser (LRU)						
7b(8)	Replace compressor (LRU)						
7b(9)	Replace final conditioning unit						
7b(10)	Replace electrical box (LRU)						
7b(11)	Replace fan (LRU)						
7b(12)	Replace refrigerant hose assembly						
7c	Elevator workcage power distribution box						
	TR: TO 21-LG118A-2-11						
7c(1)	Troubleshoot						
7c(2)	Repair						
7c(3)	Remove						
7c(4)	Replace						
7d	Sump pump 102						
	TR: TO 21-LG118A-2-28, CEM 21-SM80-6 (Vol XX), 21-SM80X-2-24-X, 35R-1-X61-X						
7d(1)	Perform biennial periodic inspection						
7d(2)	Troubleshoot						
7d(3)	Repair						
7e	Perform periodic inspection of the umbilical restraint device						
	TR: TO 21-LG118A-6						
7f	MGCS/URM access barrier set						
	TR: TO 21-LG118A-6						
7f(1)	Install						
7f(2)	Remove						
7g	LER platforms						
	TR: TO 21-LG118A-2-10						
7g(1)	Install						
7g(2)	Remove						
8	***MISSILE ALERT FACILITY MAINTENANCE***						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

8a	LCEB/MAFSB power generation system						
	TR: AFMAN 32-1077, CEM 21-SM80X-2-21-X, 21-SM80X-2-21-X-1, 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X51-X, 35R-1-X81-X, AFSPCI 32-1009						
8a(1)	Replace diesel electric unit						
8a(2)	Engine fuel oil system						
8a(2a)	Perform biennial periodic inspection						
8a(2b)	Perform quadrennial periodic inspection	5					
8a(2c)	Troubleshoot						
8a(2d)	Repair						
8a(3)	Engine lube oil system						
8a(3a)	Perform biennial periodic inspection	5					
8a(3b)	Perform quadrennial periodic inspection	5					
8a(3c)	Troubleshoot						
8a(3d)	Repair						
8a(4)	Engine cooling system						
8a(4a)	Perform biennial periodic inspection	3					
8a(4b)	Perform quadrennial periodic inspection						
8a(4c)	Troubleshoot						
8a(4d)	Repair						
8a(5)	Engine governor/injection pump/injectors						
8a(5a)	Perform biennial periodic inspection						
8a(5b)	Perform quadrennial periodic inspection						
8a(5c)	Troubleshoot						
8a(5d)	Repair						
8a(6)	Generator/exciter/voltage regulator						
8a(6a)	Perform biennial periodic inspection						
8a(6b)	Perform quadrennial periodic inspection						
8a(6c)	Troubleshoot						
8a(6d)	Repair						
8a(7)	Engine starting/stopping devices						
8a(7a)	Troubleshoot						
8a(7b)	Repair						
8a(8)	Diesel battery charger						
8a(8a)	Perform biennial periodic inspection	3					

8a(8b)	Troubleshoot						
8a(8c)	Repair						
8a(9)	Starting batteries						
8a(9a)	Perform annual periodic inspection						
8a(9b)	Perform biennial periodic inspection	3					
8a(9c)	Troubleshoot						
8a(9d)	Repair						
8a(10)	Engine cranking/alarm panel						
8a(10a)	Perform biennial periodic inspection						
8a(10b)	Troubleshoot						
8a(10c)	Repair						
8a(11)	Engine/generator control panel						
8a(11a)	Perform biennial periodic inspection						
8a(11b)	Troubleshoot						
8a(11c)	Repair						
8a(12)	Engine safety/alarm devices						
8a(12a)	Perform biennial periodic inspection						
8a(12b)	Perform quadrennial periodic inspection						
8a(12c)	Troubleshoot						
8a(12d)	Repair						
8a(13)	Engine intake/exhaust system						
8a(13a)	Perform biennial periodic inspection						
8a(13b)	Perform quadrennial periodic inspection						
8a(13c)	Troubleshoot						
8a(13d)	Repair						
8a(14)	Immersion heater						
8a(14a)	Troubleshoot						
8a(14b)	Repair						
8a(15)	Automatic switching unit/power control center						
8a(15a)	Perform biennial periodic inspection						
8a(15b)	Troubleshoot						
8a(15c)	Repair						
8a(16)	Automatic/manual transfer switches/switch gear						
8a(16a)	Perform biennial periodic inspection						
8a(16b)	Perform triennial periodic inspection						

8a(16c)	Troubleshoot						
8a(16d)	Repair						
8a(17)	Replace Minuteman Power Processor (MPP)						
8a(18)	Minuteman power processor battery/charger						
8a(18a)	Perform biennial periodic inspection	3					
8a(18b)	Troubleshoot						
8a(18c)	Repair						
8a(19)	Diesel vibration dampers/snubbers						
8a(19a)	Perform periodic inspection						
8a(19b)	Repair						
8b	Environmental control system						
	TR: TO 21-LG118A-2-7-1, 21-LG118A-6, 21M-LGM30F-6, 21M-LGM30X-2-7-X						
8b1	Brine subsystem						
8b(1a)	Perform annual periodic inspection						
8b(1b)	Perform biennial periodic inspection						
8b(1c)	Perform quadrennial periodic inspection						
8b(1d)	Troubleshoot	5					
8b(1e)	Repair						
8b(1f)	Service hydraulic accumulators						
8b(1g)	Balance brine flow (Wing 1X Only)						
8b(2)	Pneumatic brine mixing valves (Wing 1X Only)						
	TR: TO 21M-LGM30F-6, 21M-LGM30G-2-7-7						
8b(2a)	Troubleshoot						
8b(2b)	Repair						
8b(3)	Refrigerant subsystem						
8b(3a)	Perform annual periodic inspection						
8b(3b)	Perform biennial periodic inspection						
8b(3c)	Perform quadrennial periodic inspection						
8b(3d)	Troubleshoot						
8b(3e)	Repair						
8b(4)	Brine chiller control panel						
8b(4a)	Perform biennial periodic inspection						
8b(4b)	Troubleshoot						
8b(4c)	Repair						

8b(5)	Replace brine chiller unit						
8b(6)	Air conditioning subsystem/controls/alarms						
8b(6a)	Perform annual periodic inspection						
8b(6b)	Perform biennial periodic inspection						
8b(6c)	Perform quadrennial periodic inspection						
8b(6d)	Troubleshoot						
8b(6e)	Repair						
8b(6f)	Balance air flow						
8b(7)	Ventilation air subsystem/controls/alarms						
	TR: TO 21M-LGM30X-2-7-X, CEM 21-SM80X-2-20-X, 35R-1-X41-X						
8b(7a)	Perform biennial periodic inspection						
8b(7b)	Perform quadrennial periodic inspection						
8b(7c)	Troubleshoot (Wing 1X Only)						
8b(7d)	Repair						
8b(7e)	Balance air flow						
8b(8)	Refrigerator/oven						
	TR: CEMs 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X81-X, 21-SM118A-2-26-X, 21-SM118A-6 Vol XX						
8b(8a)	Perform annual periodic inspection (VAFB Only)						
8b(8b)	Perform biennial periodic inspection						
8b(8c)	Remove						
8b(8d)	Replace						
8b(9)	LCC heating system/controls (Wing 1X Only)						
8b(9a)	Perform annual periodic inspection						
8b(9b)	Troubleshoot						
8b(9c)	Repair						
8b(10)	Emergency air conditioning subsystem/controls/alarms						
8b(10a)	Perform annual periodic inspection						
8b(10b)	Perform biennial periodic inspection						
8b(10c)	Troubleshoot						
8b(10d)	Repair						
8b(11)	Oxygen regeneration unit						
8b(11a)	Perform biennial periodic inspection						
8b(11b)	Perform quadrennial periodic inspection						
8b(11c)	Repair						

8b(12)	Instrument air subsystem						
8b(12a)	Perform biennial periodic inspection	3					
8b(12b)	Troubleshoot						
8b(12c)	Repair						
8b(13)	Makeup air subsystem/controls/alarms						
8b(13a)	Perform biennial periodic inspection						
8b(13b)	Troubleshoot						
8b(13c)	Repair						
8c	Electrical power distribution system						
	TR: TOs 21M-LGM30F-6, 21M-LGM30X-2-11(-1), 21M-LGM30X-2-21-X, CEMs 21-SM80X-2-21-X, 21-SM80-6 (Vol XX), 35R-1-X51-X, TOs 21-LG118A-6WC-2, 21-LG118A-2-11-1, CEM 21-SM118A-2-21-1						
8c(1)	Perform annual inspection of emergency storage battery set						
8c(2)	LCC/LCEB/MAFSB junction boxes/distribution panels						
8c(2a)	Perform annual periodic inspection (VAFB only)						
8c(2b)	Perform biennial periodic inspection						
8c(2c)	Troubleshoot						
8c(2d)	Repair						
8c(3)	Electrical power filters						
8c(3a)	Perform biennial periodic inspection						
8c(3b)	Troubleshoot						
8c(3c)	Repair						
8c(4)	Grounding/lightning protection system						
	TR: TOs 33A1-11-687-1, 33A1-12-310-1, CEM 21-SM80X-2-21-X, 21M-SM80-6 (Vol XX), 21-LG118A-6WC-2, 21-SM118A-6, 21-SM118A-2-21-1						
8c(4a)	Perform biennial periodic inspection						
8c(4b)	Repair miscellaneous hardware						
8c(5)	Electrical wiring						
8c(5a)	Troubleshoot						
8c(5b)	Repair						
8c(6)	Perform annual periodic inspection of motor generator set						
8d	Tunnel junction/LCEB/LCC blast door						
	TR: TO 21-LG118A-2-28, 21M-LGM30F-6, 21M-LGM30X-2-11-X, 21M-LGM30X-2-28, 21M-LGM30X-2-28-X, 21-LG118A-2-28, 35M1-1-101						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

8d(1)	Perform annual periodic inspection						
8d(2)	Perform biennial periodic inspection						
8d(3)	Repair minor mechanical components						
8e	LCC lighting, emergency/survival						
	TR: TO 21M-LGM30F-6, 21M-LGM30X-2-11(-1)						
8e(1)	Perform quadrennial periodic inspection						
8e(2)	Troubleshoot						
8e(3)	Repair						
8f	Annunciator/monitor/alarm panel LCC/LCEB/MAFSB						
	TR: CEM 21-SM80X-2-21-X, 21-SM80X-2-26-X, 21-SM80-6 (Vol XX), 35R-1-X81-X						
8f(1)	Perform biennial periodic inspection						
8f(2)	Troubleshoot						
8f(3)	Repair						
8g	LCC operator's chair						
	TR: TO 21-LG118A-2-28, 21M-LGM30X-2-28, 21M-LGM30X-2-28-X						
8g(1)	Repair minor hardware						
8g(2)	Replace						
8h	Shock attenuation system						
	TR: TO 21M-LGM30X-2-11-X, 21M-LGM30X-2-28, 21M-LGM30X-2-28-X, CEM 21-SM80X-2-26-X, 35R-1-X81-X						
8h(1)	Perform biennial periodic inspection						
8h(2)	Troubleshoot						
8h(3)	Repair						
9	***LG 118 MSB MAINTENANCE***						
	TR: TOs 21-LG118A-6, 36A13-31-1						
9a	Guidance and control conditioning unit						
	TR: TOs 21-LG118A-2-6, 35E9-232-1						
9a(1)	Fan assembly						
9a(1a)	Checkout						
9a(1b)	Troubleshoot						
9a(1c)	Repair						
9a(2)	Compressor assembly						
9a(2a)	Checkout						
9a(2b)	Troubleshoot						
9a(2c)	Repair						

9a(3)	Condenser assembly						
9a(3a)	Checkout						
9a(3b)	Troubleshoot						
9a(3c)	Repair						
9a(4)	Electrical assembly						
9a(4a)	Checkout						
9a(4b)	Troubleshoot						
9a(4c)	Repair						
9a(5)	Final conditioning unit						
9a(5a)	Checkout						
9a(5b)	Troubleshoot						
9a(5c)	Repair						
9a(6)	Refrigerant hose assembly						
9a(6a)	Checkout						
9a(6b)	Troubleshoot						
9a(6c)	Repair						
9a(7)	Filter dryer						
9a(7a)	Repair						
9a(7b)	Evacuation						
9a(7c)	Service						
9b	Elevator workcage hoist assembly						
	TR: TOs 21-LG118A-2-10, 35M3-8-11-1						
9b(1)	Checkout						
9b(2)	Troubleshoot						
9b(3)	Repair						
9c	Support truck security system						
	TR: TOs 21-LG118A-6, 36A13-31-1						
9c(1)	Perform periodic inspection						
9c(2)	Troubleshoot						
9c(3)	Repair						
10	***MISSILE ALERT FACILITY MANAGEMENT***						
	TR: AFSPCI 10-204						
10a	General procedures						
	TR: CEM 21-SM80-19, Local Directives						
10a(1)	Ensure all personnel comply with MAF directives						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

10a(2)	Perform changeover procedures						
10a(3)	Conduct basic weather observations						
10a(4)	Conduct visitor safety briefings						
10a(5)	Conduct safety inspections						
10a(6)	Conduct periodic equipment/lighting checks						
10a(7)	Identify safety equipment location and operational procedures						
10a(8)	Maintain/control medical supplies						
	TR: Local directives						
10a(9)	Perform fuels management duties						
	TR: AFI 23-201, 23-204, CEMs 21-SM80-19, 21-SM80X-2-26-X, 35R-1-X81-X, Local Directives						
10a(10)	Maintain inventory and control of MAF supplies and equipment						
	TR: AFMAN 67-1, Local directives						
10a(11)	Perform facility custodial manager duties						
	TR: AFI 91-XX, Local directives, Owner's manuals						
10a(12)	Support equipment						
10a(12a)	Operate snow control vehicles/equipment						
	TR: AFI 32-1045, Local directives						
10a(12b)	Operate/maintain lawn care equipment						
	TR: Local directives, Applicable owner's manuals						
10a(12c)	Inspect below ground rescue equipment (Hoist/litter)						
10a(13)	Support helicopter operations						
	TR: CEM 21-SM80-19, Local directives						
10a(14)	Perform MAF entry/escort duties						
	TR: CEM 21-SM80-19, AFSPCI 31-1101, Local directives						
10b	Emergency procedures						
	TR: CEM 21-SM80-19, Local directives						
10b(1)	Perform above/below ground emergency response						
10b(2)	Perform MAFSB/below ground fire response						
10b(3)	Perform MAFSB/LCEB electrical isolation						
10b(4)	Perform MAFSB/LCEB DEU isolation/shutdown						
10b(5)	Perform below ground medical response						
10b(6)	Perform LCC blast door forced entry/emergency response						
10b(7)	Perform MAF fire fighting procedures						
10b(8)	Perform ECS emergency shutdown/re-start						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

10b(9)	Perform ISST fire/overheat condition response						
10b(10)	Disaster Preparedness						
	TR: AFI 32-4001, AFM 32-4005, 20AFI 10-2, CEM 21-SM80-19						
10b(10a)	Perform MAF Shelter Management operations						
10b(10b)	Perform MAF hazardous material spill response						
10b(10c)	Perform severe weather response						
10c	Facility equipment						
	TR: CEM 21-SM80-19, Local directives						
10c(1)	Water systems: Class 1, Class 2						
	CEMs 21-SM80X-2-24-X, 35R-1-X61-X						
10c(1a)	Inspect						
10c(1b)	Service						
10c(1c)	Operate						
10c(2)	Dewatering systems						
	CEMs 21-SM80X-2-24-X, 35R-1-X61-X						
10c(2a)	Inspect						
10c(2b)	Service						
10c(3)	Sewage Systems: Lagoon/Septic/Lift Station						
	CEMs 21-SM80X-2-24-X, 35R-1-X61-X						
10c(3a)	Inspect						
10c(3b)	Service						
10c(4)	Heating/HVAC systems						
	CEMs 21-SM80X-2-20-X, 35R-1-X41-X						
10c(4a)	Inspect						
10c(4b)	Service						
10c(4c)	Troubleshoot						
10c(5)	Fuel system						
	CEMs 21-SM80X-2-26-X, 35R-1-X81-X						
10c(5a)	Vehicle issue tanks						
10c(5a1)	Inspect						
10c(5a2)	Service						
10c(5b)	Support tanks						
10c(5b1)	Inspect						
10c(5b2)	Service						
10c(5b3)	Manual fuel transfer						

ATTACHMENT 2
AFSC 2M0X3 STS
ICBM FACILITY MAINTENANCE TASKS

10c(6)	Electrical power systems						
	CEMs 21-SM80X-2-21-X (vol I & II), 35R-1-X51-X						
10c(6a)	LCEB/LCSB/MAFSB DEU						
10c(6a1)	Inspect						
10c(6a2)	Operate						
10c(6b)	Perform LCSB manual power transfer						
10c(6c)	Perform primary power restoration						
10c(6d)	Perform standby power system EWO effectiveness checkout						
10c(7)	Communications Systems (ISST)						
	TR: TO 21M-LGM30F-1-22, CEM 21-SM80-19, Local directives						
10c(7a)	Inspect						
10c(7b)	Operational limits check						
10c(7c)	Load input variables						
10c(8)	Inspect/test fire alarm systems						
	TR: 21M-LGM30G-23						
10c(9)	Operate LCEB blast valves						
	TR: CEM 21-SM80-19						
10c(10)	Emergency shut-off valves						
	CEMs 21-SM80X-2-24-X, 35R-1-X61-X						
10c(10a)	Inspect						
10c(10b)	Operate						
10c(11)	Operate LCEB blast door						
	Note 1: Task provided to facilitate 3-level apprentice course Mission Ready Airmen (MRA) program.						

ATTACHMENT 3
AFSC 2M0X3 STS
SPACELIFT FACILITIES MAINTENANCE TASKS

TASK #	TASK / KNOWLEDGE ITEM	CORE TASK	START DATE	COMP DATE	TRAINEE INITIALS	TRAINER INITIALS	CERTIFYING INITIALS
1	***MAINTENANCE CONTROLLER COMMON TASKS***						
	TR: AFSPCI 21-0108, Local directives and operating instructions						
1a	Perform						
1a(1)	Post launch actions						
1a(2)	Launch day activities						
1a(3)	Walk-down procedures						
1a(4)	Disaster recovery operations						
1a(5)	Data reviews/procedure closeout						
1b	Support						
1b(1)	Program/readiness reviews						
1b(2)	Problem resolutions/troubleshooting						
1c	Ensure compliance with						
1c(1)	Procedures						
1c(2)	Local safety plans						
1c(3)	Configuration control						
1c(4)	Emergency procedures						
1c(5)	Local security requirements						
1c(6)	Environmental requirements						
1d	Conduct briefing/debriefing						
1e	Review/approve procedures						
1f	Operate communication systems						
2	***UNDERSTAND FUNCTION, OPERATION AND PROCESSING OF THE FOLLOWING ATLAS SUBSYSTEMS***						
	TR: Procedures and training materials						
2a	Launcher						
2b	Generators						
2c	Umbilical tower						
2d	Mobile service tower						
2e	Propellant/Gas storage						
2f	Water deluge and ponds						
2g	Hazardous gas detection						

ATTACHMENT 3
AFSC 2M0X3 STS
SPACELIFT FACILITIES MAINTENANCE TASKS

		CORE	START	COMP	TRAINEE	TRAINER	CERTIFYING
TASK #	**TASK / KNOWLEDGE ITEM**	TASK	DATE	DATE	INITIALS	INITIALS	INITIALS
2h	Uninterruptible power system						
2i	Environmental control system						
2j	Miscellaneous facility systems						
2k	Launch facility pressure and fluid						
2l	Launch facility vehicle stabilization						
2m	Electrical distribution and grounding						
3	***UNDERSTAND FUNCTION, OPERATION AND PROCESSING OF THE FOLLOWING DELTA SUBSYSTEMS***						
	TR: Local base support procedures/instructions; space wing procedures/instructions; system drawings/diagrams						
3a	Launcher						
3b	Elevators						
3c	Generators						
3d	Propellant/Gas						
3e	Umbilical tower						
3f	Pneumatic systems						
3g	Mobile service tower						
3h	Cranes, hoists and winches						
3i	Control and monitoring system						
3j	Miscellaneous facility systems						
3k	Environmental control systems						
3l	Water deluge and suppression						
3m	Status, warning and alarm systems						
3n	Electrical distribution and grounding						
3o	Uninterruptible power system/backup power						
4	***UNDERSTAND FUNCTION, OPERATION AND PROCESSING OF THE FOLLOWING TITAN SUBSYSTEMS***						
	TR: Procedures and training materials						
4a	Lighting						
4b	Elevators						
4c	Generator						
4d	Pneumatic						
4e	Propellant						

ATTACHMENT 3
AFSC 2M0X3 STS
SPACELIFT FACILITIES MAINTENANCE TASKS

		CORE	START	COMP	TRAINEE	TRAINER	CERTIFYING
TASK #	**TASK / KNOWLEDGE ITEM**	TASK	DATE	DATE	INITIALS	INITIALS	INITIALS
4e(1)	Fuel						
4e(2)	Oxidizer						
4f	Umbilical tower						
4g	Gaseous systems						
4h	Lightning protection						
4i	Breathing air system						
4j	Mobile service tower						
4k	Status, alarm and warning						
4l	Cranes, hoists and winches						
4m	Miscellaneous facility systems						
4n	Water deluge and suppression						
4o	Electrical distribution and grounding						
4p	Facility control and monitoring system						
4q	Heating ventilation and air conditioning						

PART II
Section B - EST SUPPORT MATERIALS

None identified.

PART II
Section C - TRAINING COURSE INDEX

1. **Purpose.** This section of CFETP identifies training courses available in the Missile and Space Facilities specialty and shows how the courses are used by each MAJCOM in their career field training programs. Career field functional managers and training management personnel should use this information to plan, develop, and update their respective MAJCOM continuation training program.

2. **Air Force In-Residence Courses**

a. *3-Level Awarding Course*. Completion of the following course is mandatory for the award of the 3-skill level.

CRS NO./TITLE	***MDS/EQUIP***	***LOCATION***	***USER***
V3ABR2M033A Missile and Space Facilities Apprentice	ICBM	VANDENBERG	AFSPC

b. *Other In-Resident Courses.*

CRS NO./TITLE	***MDS/EQUIP***	***LOCATION***	***USER***
V3AZR2M071 WS-133A/M Technical Engineering	ICBM	VANDENBERG	AFSPC
L3ATR40020 Electronics Principles		LACKLAND	ALL
ICBM-IC ICBM Maintenance Instructional Techniques Course	ICBM	F E WARREN	AFSPC
ICBM-MIC ICBM Maintenance Evaluator Course	ICBM	F E WARREN	AFSPC

3. **Extension Course Institute (ECI) Courses**

CRS NO.	***COURSE TITLE***
CDC 2M053	Missile and Space Facilities Journeyman
CDC 2M073	Missile and Space Facilities Craftsman

PART II
Section D - MAJCOM UNIQUE PROCEDURES

None Identified.